

**THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

GESTURE TECHNOLOGY PARTNERS,
LLC,

V.

HUAWEI DEVICE CO., LTD. and
HUAWEI DEVICE USA, INC.

CASE NO. 2:21-CV-40-JRG
(LEAD CASE)

GESTURE TECHNOLOGY PARTNERS,
LLC,

V.

SAMSUNG ELECTRONICS CO., LTD.
and SAMSUNG ELECTRONICS
AMERICA, INC.

CASE NO. 2:21-CV-41-JRG
(MEMBER CASE)

CLAIM CONSTRUCTION MEMORANDUM AND ORDER

Before the Court is the Opening Claim Construction Brief (Dkt. No. 64) filed by Plaintiff Gesture Technology Partners, LLC (“Plaintiff” or “GTP”). Also before the Court is the Responsive Claim Construction Brief (Dkt. No. 70) filed by Defendants Huawei Device Co., Ltd., Huawei Device USA, Inc. (collectively, “Huawei”), Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. (collectively, “Samsung”) (all, collectively, “Defendants”) as well as Plaintiff’s reply (Dkt. No. 72).

The Court held a hearing on September 21, 2021.

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I. BACKGROUND

Plaintiff alleges infringement of United States Patent Nos. 7,933,431 (the “’431 Patent”), 8,194,924 (the “’924 Patent”), 8,553,079 (the “’079 Patent”), and 8,878,949 (the “’949 Patent”) (collectively, “the patents-in-suit” or “the asserted patents”). (Dkt. No. 64, Exs. A–D.) Plaintiff submits that “[t]he Asserted Patents are generally directed to innovations in using mobile-device cameras to assist a user to interact with their device, for example including, but not limited to, unlocking the device, taking and using photos or videos, and providing other functions.” (Dkt. No. 64, at 1.)

The ’431 Patent, titled “Camera Based Sensing in Handheld, Mobile, Gaming, or Other Devices,” issued on April 26, 2011, and bears an earliest priority date of July 8, 1999. The Abstract of the ’431 Patent states:

Method and apparatus are disclosed to enable rapid TV camera and computer based sensing in many practical applications, including, but not limited to,

handheld devices, cars, and video games. Several unique forms of social video games are disclosed.

The '924 Patent resulted from a continuation of the '431 Patent.

The '079 Patent, titled "More Useful Man Machine Interfaces and Applications," issued on October 8, 2013, and bears an earliest priority date of November 9, 1998. The Abstract of the '079 Patent states:

A method for determining a gesture illuminated by a light source utilizes the light source to provide illumination through a work volume above the light source. A camera is positioned to observe and determine the gesture performed in the work volume.

The '949 Patent, titled "Camera Based Interaction and Instruction," issued on November 4, 2014, and bears an earliest priority date of May 11, 1999. The Abstract of the '949 Patent states:

Disclosed are methods and apparatus for instructing persons using computer based programs and/or remote instructors. One or more video cameras obtain images of the student or other participant. In addition images are analyzed by a computer to determine the locations or motions of one or more points on the student. This location data is fed to computer program which compares the motions to known desired movements, or alternatively provides such movement data to an instructor, typically located remotely, who can aid in analyzing student performance. The invention preferably is used with a substantially life-size display, such as a projection display can provide, in order to make the information displayed a realistic partner or instructor for the student. In addition, other applications are disclosed to sports training, dance, and remote dating.

II. LEGAL PRINCIPLES

It is understood that "[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention." *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

“In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim

language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court’s claim construction analysis is substantially guided by the Federal Circuit’s decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314–17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and

meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office (“PTO”) understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193

(Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319–24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323–25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 572 U.S. 898. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

III. AGREED TERMS

In their July 16, 2021 P.R. 4-3 Joint Claim Construction and Prehearing Statement (Dkt. No. 55) and their September 13, 2021 Joint Claim Construction Chart Pursuant to Rule 4-5(d) (Dkt. No. 73, Ex. A, at 3–4), the parties submit the following agreement:

<u>Term</u>	<u>Agreed Construction</u>
“a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object” (’431 Patent, Claim 7)	Not means-plus-function “a camera associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object”

IV. DISPUTED TERMS

The parties organize the disputed terms slightly differently in their briefing. Rather than attempt to divine an ideal arrangement of the disputed terms, the Court adopts the numbering and arrangement set forth in Plaintiff’s opening brief.

1. “means for controlling a function of said apparatus using said information”

“means for controlling a function of said apparatus using said information” (‘431 Patent, Claim 7)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>This term is governed by 35 U.S.C. § 112 ¶ 6</p> <p>Function: “controlling a function of said apparatus using said information”</p> <p>Structure: “a control system associated with a camera”</p>	<p>Means-plus-function</p> <p>Function: “controlling a function of said [handheld computer] apparatus using said information [concerning a position or movement of said object positioned by a user operating said object]”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) wherein said object is a finger (Claim 8)</p> <p>Structure: Indefinite</p>

(Dkt. No. 55, App’x 1, at 1 (footnote omitted); Dkt. No. 73, Ex. A, at 6.)

(1) The Parties’ Positions

The parties agree that this is a means-plus-function term subject to 35 U.S.C. § 112, ¶ 6, but the parties disagree as to the recited function and corresponding structure.

Plaintiff argues that “Defendants improperly seek to interject extraneous limitations into the recited function to render the term indefinite.” (Dkt. No. 64, at 4.) Plaintiff also argues that disclosure in the specification regarding a “control system” is corresponding structure because it “mirrors the language and recited function in claim 7.” (*Id.*, at 5.)

Defendants respond that “Defendants’ proposed function clarifies the antecedent basis for ‘said apparatus’ (‘handheld computer apparatus’ in the preamble) and ‘said information’ (‘information concerning a position or movement of said object positioned by a user operating

said object’ in the ‘computer means’ limitation, where ‘said object’ in turn refers to ‘an object positioned by a user operating said object’ in the ‘camera means’ limitation).” (Dkt. No. 70, at 2.) Defendants argue that “Defendants’ proposed function is consistent with Federal Circuit precedent, in which the function recited in a means-plus-function limitation has been construed as incorporating the initial antecedent phrase.” (*Id.*, at 3.) As for corresponding structure, Defendants argue that “the patent does not describe controlling the handheld device *using position or movement information*, let alone using position or movement of an object positioned by a user, as the claim requires (wherein the object is a finger for dependent Claim 8).” (*Id.*, at 4 (citations omitted).) Further, Defendants argue that the specification “does not clearly link GTP’s proposed structure to the claimed function.” (*Id.*) Finally, Defendants argue that “GTP’s proposal is not limited to a particular algorithm as required for computer-implemented functions, and the patent does not disclose any algorithm for performing the claimed function.” (*Id.*, at 5 (citation omitted).)

Plaintiff replies that “Defendants incorrectly claim that the Federal Circuit’s ‘rule’ requires incorporation of antecedent phrases,” and “Defendants have also failed to meet their burden of showing indefiniteness due to lack of corresponding structure.” (Dkt. No. 72, at 1 (citation omitted).) Plaintiff argues that “Defendants’ arguments are based on their improper construction of the recited function,” and “the ’431 Patent expressly states that the handheld embodiment includes the inventions recited in the patent.” (*Id.*)

At the September 21, 2021 hearing, Plaintiff emphasized that Defendants bear the burden on the issue of indefiniteness. Plaintiff also reiterated its arguments that the specification discloses corresponding structure, including an algorithm set forth in prose, which Plaintiff urged is permissible. Defendants responded that the disclosures in the specification cited by Plaintiff

refer to generic control systems, disclose no particular structure, and contain no linkage to the claimed function.

(2) Analysis

Title 35 U.S.C. § 112(f) (formerly § 112, ¶ 6) provides: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” “In exchange for using this form of claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function.” *Triton Tech of Tex., LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014).

Claim 7 of the '431 Patent recites (emphasis added):

7. Handheld computer apparatus comprising:
 - a housing;
 - a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;
 - computer means within said housing for analyzing said image to determine information concerning a position or movement of said object; and
 - means for controlling a function of said apparatus using said information.*

At first blush, Defendants’ proposal of referring to the antecedent basis for “said apparatus” appears confusing because in their briefing Defendants did not expressly argue that the preamble is limiting. At the September 21, 2021 hearing, Defendants clarified that by proposing referring to the antecedent basis for “said apparatus,” Defendants are indeed proposing that the recital of “[h]andheld computer apparatus” in the preamble is limiting. At the hearing, Plaintiff replied as to other arguments presented by Defendants but did not challenge Defendants’ assertion that the preamble is limiting.

Relevant authorities support Defendants’ contention that the preamble is limiting. *See, e.g., Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.”); *Zumbiel Co. v. Kappos*, 702 F.3d 1371, 1385 (Fed. Cir. 2012) (similar); *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (discussing general principles of whether preamble is limiting). This is also consistent with an *Inter Partes* Review proceeding cited by Defendants in which the patentee recently stated that “the preamble of claim 7 should be construed as a limitation.” (Dkt. No. 70, Ex. T, IPR2021-00917, Aug. 26, 2021 Patent Owner’s Response to the Petition for *Inter Partes* Review, at 6–7.)

As to Defendants’ proposal of referring to “information concerning a position or movement of said object” and “at least one object positioned by a user operating said object,” this is the antecedent basis for “said information” (and, in turn, “said object”) in the disputed term, and setting forth these antecedents in the construction is useful and appropriate.

The Court therefore finds that the claimed function is “controlling a function of a handheld computer apparatus using information concerning a position or movement of at least one object positioned by a user operating said object.”

As for whether the specification discloses sufficient corresponding structure, Plaintiff cites the following disclosure:

Given the invention, the potential for target acquisition in a millisecond or two thus is achievable with simple pixel addressable CMOS cameras coming on stream now (today costing under \$50), assuming the target points are easily identifiable from at least one of brightness (over a value), contrast (with respect to surroundings), color, color contrast, and more difficult, shape or pattern (e.g., a plaid, or herringbone portion of a shirt). This has major ramifications for the robustness of *control systems* built on such camera based acquisition, be they for controlling displays, or machines or whatever.

'431 Patent at 5:50–60 (emphasis added). Plaintiff additionally cites the following disclosures (see Dkt. No. 72, at 1):

FIG. 8A illustrates control of functions with the invention, using a handheld device which itself has functions (for example, a cell phone).

* * *

The basic idea here is that a *device which one holds in ones hand* for use in its own right, can also be used with the invention herein to *perform a control function* by determining its position, orientation, pointing direction or other variable with respect to one or more external objects, using an optical sensing apparatus such as a TV camera located externally to sense the handheld device, or with a camera located in the handheld device, to sense datums or other information external for example to the device.

* * *

As one illustrative example, to signal a fax unit 824 in the car to print data coming through on the phone, the user just points (as illustrated in position 2) the cell phone toward the fax, and the TV camera 815 scans the images of targets 805-807 on the face toward the camera, and the *computer 830* connected to the camera *analyzes* the target images (including successive images if motion in a direction for example is used as an indicator, rather than pointing angle for example), determines the cell phone position and/or orientation or motion and *commands* the fax to print if such is signaled by the cell phone position orientation or motion chosen.

* * *

One function is just to acquire an image for transmission via for example the cell phone[']s own connection. This is illustrated in FIG. 8B, where an image of object 849 acquired by camera 850 of cell phone 851 held by user 852 is transmitted over mobile phone link 853 to a remote location and displayed, for example. While this image can be of the user, or someone or something of interest, for example a house, if a real estate agent is making the call, it is also possible to acquire features of an object and use it to determine something.

Id. at 11:62–64, 12:1–9, 12:42–52 & 12:65–13:7 (emphasis added).

When the first above-reproduced disclosure is read in view of these additional disclosures cited by Plaintiff, the specification sets forth the “control system” with “sufficient particularity”

and “clearly link[s]” this structure to the claimed function. *Triton*, 753 F.3d at 1378. Indeed, the claim language itself sets forth an algorithm when the disputed term is read in conjunction with the separately recited “computer means” for analyzing said image to determine information concerning a position or movement of said object. The claim expressly provides for using this information so as to control a function.

The Court therefore hereby finds that **“means for controlling a function of said apparatus using said information”** is a means-plus-function term, the claimed function is **“controlling a function of a handheld computer apparatus using information concerning a position or movement of at least one object positioned by a user operating said object,”** and the corresponding structure is **“a control system programmed to control a function based on information concerning a position or movement of said object; and equivalents thereof.”**

2. “computer means within said housing for analyzing said image to determine information concerning a position or movement of said object”

<p>“computer means within said housing for analyzing said image to determine information concerning a position or movement of said object” (’431 Patent, Claim 7)</p>	
<p>Plaintiff’s Proposed Construction</p>	<p>Defendants’ Proposed Construction</p>
<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.</p> <p>Alternatively, if the Court finds this term is subject to 35 U.S.C. § 112 ¶ 6:</p> <p>Function: “analyzing said image to determine information concerning a position or movement of an object”</p> <p>Structure: “a computer with at least one microprocessor specially programmed [sic] to determine information concerning a position or movement of said object”</p>	<p>Means-plus-function</p> <p>Function: “analyzing said image to determine information concerning a position or movement of said object [positioned by a user operating said object]”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) wherein said object is a finger (Claim 8)</p> <p>Structure: “A computer programmed to (1) scan the pixel elements in a matrix array on which said image is formed, and then calculate the centroid location “x,y” of a target on the object using the moment method disclosed in U.S. Patent No. 4,219,847 to Pinkney, as disclosed at 4:48–62; (2) add or subtract said image from prior images and identify movement blur, as disclosed at 6:64–7:14, 7:22–29; (3) obtain a time variant intensity change in said image from the detected output voltage from the signal conditioning of the camera means or by subtracting images and observing the difference due to such variation, as disclosed at 8:25–38; or (4) detect a change in color reflected from a diffractive, refractive, or interference based element on said object that reflects different colors during movement, as disclosed at 8:60–9:14.”</p>

(Dkt. No. 55, App’x 1, at 2–3; Dkt. No. 73, Ex. A, at 4–5.)

(1) The Parties' Positions

Plaintiff argues that the word “computer” connotes structure such that this is *not* a means-plus-function term under 35 U.S.C. § 112, ¶ 6, and Plaintiff argues that this structure is sufficient to perform the recited function because “the claimed function is ‘analyzing to determine,’ [and] [t]his is what computers do[,] [t]hey analyze data to determine things.” (Dkt. No. 64, at 6.) Alternatively, Plaintiff argues that “Defendants seek to inject limitations into the recited function, this time in two different ways: (1) adding the phrase ‘positioned by a user operating said object’ directly into the function, and (2) adding unclaimed functional limitations through their proposed structure.” (*Id.*, at 7.) Further, Plaintiff argues that Defendants’ proposed corresponding structure is not necessary to perform the claimed function, and “Defendants’ additional limitations address the types of data that *could be analyzed, they do not form the structure for analyzing the data.*” (*Id.*, at 10.)

Defendants respond that special programming is required for this claimed function, and “a computer by itself, without additional software, is not sufficient structure for analyzing an image to determine information concerning a position or movement of an object positioned by a user.” (Dkt. No. 70, at 6 (citations omitted).) Further, Defendants argue that “[t]he *Katz* exception [to the algorithm requirement] does not apply because analyzing an image to determine a position or movement of an object positioned by a user cannot be performed by a general purpose computer without special programming.” (*Id.*, at 7 (citing *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011)).)

Plaintiff replies that the patentee’s statements during prosecution cited by Defendants “are not relevant to whether the claim recites sufficient structure.” (Dkt. No. 72, at 2.) Plaintiff also argues that “the recited function adequately describes the software necessary to provide

sufficient structure to the ‘computer means.’” (*Id.*) Alternatively, Plaintiff reiterates that “Defendants’ proposed structure contains extraneous structure that is not necessary to perform the recited function and Defendants have not shown that their proposed structure corresponds to the claimed function.” (*Id.*, at 2–3.)

At the September 21, 2021 hearing, Plaintiff argued that the claim language itself recites specific programming. Defendants responded that it is not enough the “computer means” is recited as performing a function.

(2) Analysis

Claim 7 of the ’431 Patent recites (emphasis added):

7. Handheld computer apparatus comprising:
 - a housing;
 - a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;
 - computer means within said housing for analyzing said image to determine information concerning a position or movement of said object;* and
 - means for controlling a function of said apparatus using said information.

The specification discloses, for example:

The invention herein and disclosed in portions of other copending applications noted above, comprehends a combination of one or more TV cameras (or other suitable electro-optical sensors) and a computer to provide various position and orientation related functions of use.

* * *

[T]he computer 830 connected to the camera analyzes the target images (including successive images if motion in a direction for example is used as an indicator, rather than pointing angle for example) [and] determines the cell phone position and/or orientation or motion

’431 Patent at 11:55–58 & 12:46–51; *see, e.g., id.* at 4:48–62 (determining “the centroid ‘x, y’ of the pixel elements on which the target image lies”), 6:64–7:14 (“the blur direction indicates direction of motion”) & 8:25–38 (regarding detecting “twinkle effects”)

“[U]se of the word ‘means’ in a claim element creates a rebuttable presumption that § 112, para. 6 applies.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). Also, this “computer means . . . for” is “drafted in the same format as a traditional means-plus-function limitation,” with a “means” and the word “for” followed by a recitation of functional language. *Id.* at 1350.

But although the term “computer” may refer to a broad class of structures, this breadth does not necessarily render the term non-structural. *See Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1019 (Fed. Cir. 2017) (finding “wireless device means” not a means-plus-function term, noting that “it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function”) (quoting *TecSec, Inc. v. Int’l Bus. Machs. Corp.*, 731 F.3d 1336, 1347 (Fed. Cir. 2013)). A recent decision of the Federal Circuit is in accord:

As used in the claims of the ’591 patent, the term “digital processing unit” clearly serves as a stand-in for a “general purpose computer” or a “central processing unit,” each of which would be understood as a reference to structure in this case, not simply any device that can perform a particular function.

Samsung Elecs. Am., Inc. v. Prisua Eng’g Corp., 948 F.3d 1342, 1354 (Fed. Cir. 2020).

At the September 21, 2021 hearing, the parties also disputed the significance of this Court’s decision in *T-Netix, Inc. v. Global Tel*Link Corp.*, No. 2:01-CV-189, 2003 WL 25782759, at *9 (E.D. Tex. Aug. 15, 2003) (Folsom, J.). Upon review, and in light of the authorities set forth above, *T-Netix* does not significantly affect the Court’s analysis.

On balance, the presumption in favor of means-plus-function treatment for this “means” term is rebutted, and the Court hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

Defendants cite prosecution history in which the patentee purportedly interpreted this “computer means . . .” term as a means-plus-function term. The examiner rejected various claims based on the “Hedges” reference (United States Patent No. 4,339,798):

1. Claims 9–13, 21–28 rejected under 35 U.S.C. 102(b) as being anticipated by Hedges (4339798)

Hedges teaches monitoring a live game by a TV camera, the game table having information such as roulette game rules/betting spaces etc., and camera monitoring while players place game markers (chips). Hedges also teaches a computer processor (41), identifying and displaying game markers on a live game display screen (44), establishing co-ordinate system (5:21–26). Applicant may note that roulette boards are stiff as well known in the art and the limitation is inherently taught.

As explained in previous office action all casinos are equipped with cameras that constantly monitor in real time all movements of every casino activity on every table including identifying all game pieces and their positions. TV Cameras placed in strategic locations constantly record all casino movements that are monitored on monitors 60. Hedges clearly teaches physical markers at a remote location “capable of being moved” on a casino table (abstract). Newly added limitations in a computer means phrase only represent intended use “for analyzing”, “for recognizing”, etc. do not specifically claim structure that would limit the apparatus claimed. Limitations [w]ith reference to “generating sensation”, such limitations are personal reactions and not part of apparatus.

(Dkt. No. 70, Ex. I, Jan. 24, 2008 Office Action, at 2 (all emphasis as in original).) The patentee responded:

By making this last statement, the examiner has in effect refused to give any patentable weight to the “function” part of the computer “means”. Such is contrary to 35 USC § 112, 6th ¶, as well as various sections of the MPEP [(Manual of Patent Examining Procedure)] and long established case law. As well appreciated, § 112, 6th ¶ specifically authorizes the use of “means or step plus function” limitations in a claim. And when such limitations are used, it would be absurd to then ignore the “function” portion as “only representing intended use” as the examiner has done with the present claims.

With a proper appreciation that the “function” part of every means/step plus function limitation in a claim must not be ignored, it will be appreciated that independent apparatus claim 9 and independent method claim 21 both clearly and particularly differentiate from the prior art apparatus and method of the Hedges patent (and the other cited references, the Levy patent and the Karmakar patent,

which have similar disclosures) where casino games, or any such live game, are (merely) monitored [fn: One convenient dictionary definition of “monitor” being: “keep under surveillance”] by a TV camera and the output of the TV camera recorded to a suitable computer. In particular, it is claimed that the apparatus of the present invention includes a computer means for performing the following specific functions (and likewise the method recites a computer performing the noted steps and functions):

- a) analyzing the output of said TV camera and recognizing from the analysis a relative position of said marker with respect to the information on said board,
- b) analyzing and then recognizing, after a movement of said marker during the play of the game which is viewed by said TV camera, a new position of said marker with respect to the information on said board, and
- c) automatically generating, after the new position of said marker is recognized, a sensory output designed to be capable of being perceived by the person, said sensory output being different from a view of said board and marker thereon and being associated with the recognized new position of said marker with respect to the information on said board.

No such analyzing [fn: One convenient dictionary definition of “analyze” being: “an investigation of the component parts of a whole and their relations in making up the whole”] and recognizing [fn: One convenient dictionary definition of “recognize” being: “be fully aware or cognizant of”, which is obviously more than using a TV camera to record the activities of a board game under surveillance] by a computer takes place in the situation described by the examiner of a casino which monitors activity with TV cameras as in the Hedges patent, the Levy patent and the Karmakar patent. In particular, such a monitoring system does not “analyze” the TV camera output in order to “recognize” a relative position of a marker and a new position of the marker with respect to the information on the board. The actions of “analyzing” and “recognizing” together are definitionally different from the action to “display” or even to “monitor”, as would be readily recognized by those of ordinary skill in computer vision which is the standard which should be applied. Further, and significantly, such a prior art monitoring system does not generate a “sensory output” after the new position is “recognized”, where the sensory output is different from a view of the board or game. Rather, the monitoring system of the Hedges patent (and the Levy patent and the Karmakar patent) described by the examiner merely displays, without any analysis or recognition, whatever is within the field of view of the TV camera.

* * *

The examiner’s rejections under 35 USC § 102 for anticipation of independent claims 9 and 21 by the Hedges patent, the Levy patent, or the Karmakar patent are all based on the presence in the references of a computer means, and thereafter the ignoring of the “functional” limitations of the claims because such limitations are “intended use”. However, as evident from the above, and further from the MPEP [fn: See §§ 2183 or 2184.II], the examiner has failed to provide a prima facie

showing of an equivalent element in each of these prior art references since “unless an element performs the identical function specified in the claim, it cannot be an equivalent for the purposes of **35 U.S.C. 112, sixth paragraph**” (see MPEP § 2183.II, []).

(Dkt. No. 70, Ex. H, Apr. 24, 2008 Pre-Appeal Brief Request for Review, at 2–3 (all emphasis as in original).)

As a threshold matter, this prosecution history involved grandparent patent application No. 10/893,534, not the ’431 Patent here at issue. This prosecution history thus related to different claims with different limitations that are not here at issue. (*See id.*, Ex. J, Oct. 29, 2007 Amendment, Attachment B, at 1–3.) This distinction is sufficient for Defendant’s reliance on this prosecution history to be unavailing.

Alternatively and in addition, even if all of the particular statements in this prosecution history are considered, the examiner and the patentee discussed different claim elements involving, for example, a “TV camera,” “markers,” “play of a game,” and “sensory output.” The patentee responded to the examiner by arguing as to the various “analyzing” and “generating” functional limitations involving those claim elements. The patentee thus focused on the functional limitations, not on whether the phrase “computer means” connoted structure.

Finally, even if this prosecution were deemed to include a statement by the patentee that any term including the phrase “computer means” should be governed by 35 U.S.C. § 112, ¶ 6 (a proposition that is far from evident upon the above-discussed attenuated nature of this prosecution history as applied to the different limitations of the related but different patent here at issue for the present disputed term), Defendants do not show that a patentee’s assertion of 35 U.S.C. § 112, ¶ 6 necessarily precludes a court from finding otherwise during the course of claim construction proceedings.

The Court therefore hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term, and Defendants do not propose any alternative construction.

The Court accordingly hereby construes **“computer means within said housing for analyzing said image to determine information concerning a position or movement of said object”** to have its **plain meaning**.

3. “display function which is controlled”

“display function which is controlled” (’431 Patent, Claim 9)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.	Means-plus-function Function: “controlling a display function” Structure: “a computer programmed to (1) move a slider on the display as disclosed at 13:54–67, (2) turn a knob on the display as disclosed at 13:63–14:9, or (3) throw a switch on the display as disclosed at 13:63–13:67”

(Dkt. No. 55, App’x 1, at 4; Dkt. No. 73, Ex. A, at 6–7.)

(1) The Parties’ Positions

Plaintiff argues that “Defendants cannot overcome the presumption against this term being construed as means plus function.” (Dkt. No. 64, at 10.) Plaintiff submits that this disputed term does not use the word “means,” and Plaintiff argues that the phrase “display function” is not a generic term. (*Id.*)

Defendants respond that this is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6 because “Claim 9 recites a function—controlling a display function—but no structure for

performing that function,” and “the corresponding structure for controlling a display function is a computer programmed to perform these steps as described in the specification.” (Dkt. No. 70, at 8 (citation omitted).)

Plaintiff replies that Defendants fail to rebut the presumption, and “the claim does not recite ‘controlling a display function’ as [Defendants] allege.” (Dkt. No. 72, at 3 (citation omitted).)

At the September 21, 2021 hearing, Plaintiff emphasized that the recited “display function” is not recited as being “for” doing anything but rather is recited as being controlled by something else. Defendants responded that this term recites function without reciting structure for performing the function.

(2) Analysis

“[T]he failure to use the word ‘means’ . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply.” *Williamson*, 792 F.3d at 1348 (citations and internal quotation marks omitted). “When a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* at 1349 (citations and internal quotation marks omitted).

Williamson, in an *en banc* portion of the decision, abrogated prior statements that the absence of the word “means” gives rise to a “strong” presumption against means-plus-function treatment. *Id.* (citation omitted). *Williamson* also abrogated prior statements that this presumption “is not readily overcome” and that this presumption cannot be overcome “without a showing that the limitation essentially is devoid of anything that can be construed as structure.” *Id.* (citations omitted). Instead, *Williamson* found, “[h]enceforth, we will apply the presumption

as we have done prior to *Lighting World . . .*” *Id.* (citing *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004)). In a subsequent part of the decision not considered *en banc*, *Williamson* affirmed the district court’s finding that the term “distributed learning control module” was a means-plus-function term that was indefinite because of lack of corresponding structure, and in doing so *Williamson* stated that “‘module’ is a well-known nonce word.” 792 F.3d at 1350.

Here, Claim 9 of the ’431 Patent depends from Claim 7, and Claims 7 and 9 recite (emphasis added):

7. Handheld computer apparatus comprising:
 - a housing;
 - a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;
 - computer means within said housing for analyzing said image to determine information concerning a position or movement of said object; and
 - means for controlling a function of said apparatus using said information.

* * *

9. Apparatus according to claim 7, further including a *display function which is controlled*.

The use of the word “function” in this disputed term is not necessarily functional in nature. Rather, the phrase “display function” in this context refers to a category of user interface elements, not something that performs a function of displaying. Defendants have not persuasively rebutted the presumption against means-plus-function treatment for this non-means term. The Court therefore hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term, and Defendants do not propose any alternative construction.

The Court therefore hereby construes “**display function which is controlled**” to have its **plain meaning**.

4. “sensing means associated with said device”

<p style="text-align: center;">“sensing means associated with said device” (’431 Patent, Claim 1)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.</p> <p>Alternatively, if the Court finds this term is subject to 35 U.S.C. § 112 ¶ 6:</p> <p>Function: “electro-optically sensing light reflected from at least one finger”</p> <p>Structure: “electro-optical sensor”</p>	<p>Means-plus-function</p> <p>Function: “electro-optically sensing light reflected from said at least one finger”</p> <p>Structure: “a camera”</p>

(Dkt. No. 55, App’x 1, at 4; Dkt. No. 73, Ex. A, at 2–3.)

(1) The Parties’ Positions

Plaintiff argues that this is not a means-plus-function term under 35 U.S.C. § 112, ¶ 6 because “[a] POSITA [(person of ordinary skill in the art)] would understand that a ‘sensing means’ is simply a sensor, which is a device that senses stimuli,” and “the claimed ‘sensing means’ is a sensor that electro-optically senses reflected light.” (Dkt. No. 64, at 11.) Alternatively, Plaintiff argues that if this is a means-plus-function term, then “[a]lthough some embodiments use cameras as an example of an electro-optical sensor, the specification contemplates that any ‘suitable electro-optical sensors’ may be used in place of the described camera.” (*Id.* (quoting ’431 Patent at 11:54–57).)

Defendants respond that “[t]he ‘sensing’ prefix does not impart structure, but refers only to the function,” and “[t]he patent describes only a camera to perform the claimed function.”

(Dkt. No. 70, at 8–9 (citations omitted).) As to the disclosure of “suitable” electro-optical sensors (’431 Patent at 11:54–57), Defendants argue that this statement “admit[s] that not all electro-optical sensors may be used with the invention,” and “[t]he patent, however, does not state which are ‘suitable’ and does not link a generic ‘electro-optical sensor’ to the claimed function.” (Dkt. No. 70, at 9 (citations omitted).)

Plaintiff replies that “Defendants do not refute the fact that a ‘sensing means,’ according to claim 1, that electro-optically senses light, recites sufficient structure to a person of ordinary skill in the art. *See* Resp. Br. at 7–8. Therefore, the construction of this term is not governed by 35 U.S.C. § 112, ¶ 6.” (Dkt. No. 72, at 3 (citation omitted).) Alternatively, Plaintiff argues that “Defendants identify no basis to exclude ‘electro-optical sensors’ from this term.” (*Id.*)

At the September 21, 2021 hearing, Plaintiff argued that this “sensing means” is a sensor that, for example, may or may not sense different colors, depending on the application, or could sense infrared. Defendants responded that his “sensing means” is defined solely by its function.

(2) Analysis

Legal principles regarding 35 U.S.C. § 112, ¶ 6 are set forth regarding the “means for controlling . . .,” “computer means . . .,” and “display function . . .” terms, discussed above.

Claim 1 of the ’431 Patent recites (emphasis added):

1. A method for controlling a handheld computing device comprising the steps of:
 - holding said device in one hand;
 - moving at least one finger in space in order to signal a command to said device;
 - electro-optically sensing light reflected from said at least one finger using a *sensing means associated with said device*;
 - determining from said sensed light the movement of said finger, and
 - using said sensed finger movement information, controlling said device in accordance with said command.

Although “use of the word ‘means’ in a claim element creates a rebuttable presumption that § 112, para. 6 applies,” “the presence of modifiers can change the meaning” so as to “provide . . . structural significance to the term.” *Williamson*, 792 F.3d at 1348, 1351. Here, the modifier “sensing” connotes structure in the form of a sensor. Further, this disputed term, “sensing means associated with said device,” is not “drafted in the same format as a traditional means-plus-function limitation.” *Id.* at 1350. On balance, Plaintiff persuasively rebuts the presumption that 35 U.S.C. § 112, ¶ 6 applies. *See id.*; *see also Skky*, 859 F.3d at 1019.

Instead, this disputed term refers to a sensor, and surrounding claim language provides context for electro-optically sensing. The specification is consistent with this understanding:

The invention herein and disclosed in portions of other copending applications noted above, comprehends a combination of *one or more TV cameras (or other suitable electro-optical sensors)* and a computer to provide various position and orientation related functions of use. It also comprehends the combination of these functions with the basic task of generating, storing and/or transmitting a TV image of the scene acquired either in two or three dimensions.

’431 Patent at 11:54–61 (emphasis added).

The Court therefore hereby construes **“sensing means associated with said device”** to mean **“sensor associated with said device.”**

5. “means for transmitting information”

<p style="text-align: center;">“means for transmitting information” (’431 Patent, Claim 11)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>This term is governed by 35 U.S.C. § 112 ¶ 6.</p> <p>Function: “transmitting information”</p> <p>Structure: “a transmitter”</p>	<p>Means-plus-function</p> <p>Function: “transmitting information”</p> <p>Structure: “cellular transceiver”</p>

(Dkt. No. 55, App’x 1, at 5; Dkt. No. 73, Ex. A, at 7.)

(1) The Parties’ Positions

Plaintiff argues that “Defendants’ structure should be rejected because the specification does not clearly link it to performing the recited function,” and “[a] POSITA would understand that ‘a transmitter’ is the structure disclosed and clearly linked to the specification for performing the recited function.” (Dkt. No. 64, at 12.) Plaintiff submits, for example, that “[a] POSITA would understand that at the time of the invention, cellular phones and similar handheld devices included different types of transmitters, such as Bluetooth and Wi-Fi.” (*Id.* (citing *id.*, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶ 57).) Plaintiff argues that “Defendants’ proposed structure of ‘cellular transceiver’ unnecessarily limits the term and goes beyond what is necessary to perform the recited function.” (Dkt. No. 64, at 12.)

Defendants respond that “Defendants herein revise their proposed structure to a ‘cellular transmitter,’ [and] [t]he only remaining aspect of the dispute is whether the transmitter must be cellular.” (Dkt. No. 70, at 9.) Defendants submit that “[t]he patent never mentions Bluetooth or Wi-Fi, neither of which were ubiquitous features of cell phones in the 1990s.” (*Id.*)

Plaintiff replies: “The ’431 Patent does not describe a ‘cellular transmitter;’ rather, it describes the transmitter within a cellular phone. And the only evidence in the record confirms that, at the time of the invention, cellular phones and similar handheld devices included different types of transmitters, such as Bluetooth and Wi-Fi.” (Dkt. No. 72, at 4 (citation omitted).)

At the September 21, 2021 hearing, the parties reiterated the arguments set forth in their briefing.

(2) Analysis

Legal principles regarding 35 U.S.C. § 112, ¶ 6 are set forth regarding other terms addressed above, such as the “means for controlling . . .” and “computer means . . .” terms.

Claim 11 of the ’431 Patent depends from Claim 7, and Claims 7 and 11 recite (emphasis added):

7. Handheld computer apparatus comprising:
 - a housing;
 - a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;
 - computer means within said housing for analyzing said image to determine information concerning a position or movement of said object; and
 - means for controlling a function of said apparatus using said information.

* * *

11. Apparatus according to claim 7, further including *means for transmitting information*.

The parties agree that this is a means-plus-function term, but the parties dispute whether the corresponding structure must be “cellular.” The specification discloses a cell phone as an example of a handheld device:

FIG. 8A illustrates control of functions with the invention, using a handheld device which itself has functions (*for example, a cell phone*). The purpose is to add functionality to the device, without complicating its base function, and/or alternatively add a method to interact with the device to achieve other purposes.

'431 Patent at 11:62–67 (emphasis added). The specification further discloses:

One function is just to acquire an image for transmission via for example the cell phone[']s own connection. This is illustrated in FIG. 88, where an image of object 849 acquired by camera 850 of cell phone 851 held by user 852 is transmitted over mobile phone link 853 to a remote location and displayed, for example. While this image can be of the user, or someone or something of interest, for example a house, if a real estate agent is making the call, it is also possible to acquire features of an object and use it to determine something.

Id. at 12:65–13:7.

Ordinarily, the claimed invention should not be limited to specific features of particular disclosed embodiments. *See Phillips*, 415 F.3d at 1323. For a means-plus-function term, however, the scope of the term is limited to disclosed structure that corresponds to the claimed function. *See, e.g., Triton*, 753 F.3d at 1378. Here, for the claimed function of “transmitting information,” the above-reproduced disclosures demonstrate that the corresponding structure is a “cell phone” (as that phrase was understood at the time of the invention, *see, e.g., Phillips*, 415 F.3d at 1313 (“meaning of claim ‘must be interpreted as of [the] effective filing date’ of the patent application) (quoting *PC Connector Solutions LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1363 (Fed. Cir. 2005))). Indeed, the specification sets forth no other relevant type of communication device, such as a Bluetooth device or a Wi-Fi device as suggested by Plaintiff. (*See* Dkt. No. 64, at 12.)

The opinion of Plaintiff’s expert, that “[a] POSITA would understand that at the time of the invention, cellular phones and similar handheld devices included different types of transmitters, such as Bluetooth and Wi-Fi,” is not supported by any examples or explanation and, in the absence of any explicit or implicit support in the intrinsic evidence, is unpersuasive. (*See* Dkt. No. 64, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶ 57.) Indeed, neither side’s expert has provided supporting evidence or explanation for their opinions that cell phones at the time of the

invention did or did not include Wi-Fi and/or Bluetooth communication capabilities. As set forth above, the appropriate corresponding structure supported by the specification is simply a cell phone. *See* '431 Patent at 11:62–67 & 12:65–13:7 (reproduced above).

The Court therefore hereby finds that **“means for transmitting information”** is a means-plus-function term, the claimed function is **“transmitting information,”** and the corresponding structure is **“a cell phone, and equivalents thereof.”**

6. “a light source for illuminating said object”

“a light source for illuminating said object” ('431 Patent, Claim 12)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“a light source designed to transmit light directly onto said object”

(Dkt. No. 55, App’x 1, at 6; Dkt. No. 73, Ex. A, at 7.)

(1) The Parties’ Positions

Plaintiff argues that “Defendants fundamentally rewrite and alter the scope of the claim by requiring that the ‘light source’ be ‘designed to transmit light directly onto said object,’” and “[t]hat alters the ordinary meaning of the claimed phrase without any disclaimer whatsoever.” (Dkt. No. 64, at 13.)

Defendants respond that “Defendants seek to clarify how the function (‘for illuminating said object’) limits the claimed structure, particularly in view of the intrinsic record clearly distinguishing displays (which GTP contends meets the claimed ‘light source’) from light sources.” (Dkt. No. 70, at 10 (citation omitted).)

Plaintiff replies that “Defendants do not argue (because they cannot) that this term requires construction to assist the jury,” and “Defendants fail to identify a clear and unmistakable disclaimer to support their improper construction.” (Dkt. No. 72, at 4.)

At the September 21, 2021 hearing, Defendants reiterated that different terms generally have different meanings, and Defendants cited *Becton, Dickinson & Co. v. Tyco Healthcare Group*, 616 F.3d 1249, 1254 (Fed. Cir. 2010).

(2) Analysis

This disputed term appears in Claim 12 of the ’431 Patent, which depends from Claim 7, and Claims 7 and 12 recite (emphasis added):

7. Handheld computer apparatus comprising:
 - a housing;
 - a camera means associated with said housing for obtaining an image using reflected light of at least one object positioned by a user operating said object;
 - computer means within said housing for analyzing said image to determine information concerning a position or movement of said object; and
 - means for controlling a function of said apparatus using said information.

* * *

12. Apparatus according to claim 7, further including *a light source for illuminating said object*.

The specification discloses:

The embodiment depicted in FIG. 1A illustrates the basic embodiments of many of my co-pending applications above. A stereo pair of cameras 100 and 101 located on each side of the upper surface of monitor 102 (for example a rear projection TV of 60 inch diagonal screen size) with *display screen 103* facing the user, are connected to PC computer 106 (integrated in this case into the monitor housing), for example a 400 Mhz Pentium II. For appearances and protection a single extensive cover window may be used to cover both cameras and their associated *light sources 110 and 111, typically LEDs*.

The LEDs in this application are typically used to *illuminate targets* associated with any of the fingers, hand, feet and head of the user, or objects such as 131 held by a user, 135 with hands 136 and 137, and head 138. These targets, such as circular target 140 and band target 141 on object 131 are desirably, but not

necessarily, retro-reflective, and may be constituted by the object features themselves (e.g., a finger tip, such as 145), or by features provided on clothing worn by the user (e.g., a shirt button 147 or polka dot 148, or by artificial targets other than retroreflectors.

'431 Patent at 3:23–43 (emphasis added).

On balance, Defendants do not persuasively justify precluding a display from also serving as a light source. The use of both a display screen and LED light sources in a particular embodiment, such as quoted above, does not compel otherwise. *See Phillips*, 415 F.3d at 1323. Although a “light source” would not necessarily satisfy a “display” requirement, Defendants do not demonstrate that a “display” can never serve as a “light source” for purposes of the present disputed term. That is, the terms “light source” and “display” are readily distinguishable from one another without precluding a “display” from serving as a “light source.”

The Court therefore hereby expressly rejects Defendants’ proposed construction, and no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”); *ActiveVideo Networks, Inc. v. Verizon Commcn’s, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012); *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015); *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 977–79 (Fed. Cir. 2021).

The Court accordingly hereby construes “**a light source for illuminating said object**” to have its **plain meaning**.

7. “wherein said movement is sensed in 3 dimensions”

“wherein said movement is sensed in 3 dimensions” (’431 Patent, Claim 4)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“wherein said movement is determined with respect to three perpendicular axes”

(Dkt. No. 55, App’x 1, at 6; Dkt. No. 73, Ex. A, at 3.)

(1) The Parties’ Positions

Plaintiff argues that Defendants’ proposal of replacing “sensed” with “determined” should be rejected because “sensing that movement has occurred in three dimensions does not require determining the distance or direction of movement.” (Dkt. No. 64, at 14.) “Moreover,” Plaintiff argues, “Defendants seek to impose a specific coordinate system on this limitation when the claim does not require one.” (*Id.*)

Defendants respond that “[a]lthough cameras are used to take pictures of three-dimensional objects, the information they capture is not always in three dimensions,” and “Defendants’ proposal clarifies what it means for movement and information to be sensed and obtained in three dimensions, consistent with the intrinsic evidence and technical dictionary definitions.” (Dkt. No. 70, at 11 (citations omitted).)

Plaintiff replies that “Defendants provide no reason why the Court should replace the term ‘sensed’ with ‘determined’ other than relying on extrinsic evidence.” (Dkt. No. 72, at 5.)

At the September 21, 2021 hearing, Defendants submitted that Defendants are not arguing for a finding of lexicography but rather are proposing to clarify the meaning of this disputed term.

(2) Analysis

This disputed term appears in Claim 4 of the '431 Patent, which depends from Claim 1, and Claims 1 and 4 recite (emphasis added):

1. A method for controlling a handheld computing device comprising the steps of:

holding said device in one hand;
moving at least one finger in space in order to signal a command to said device;
electro-optically sensing light reflected from said at least one finger using a sensing means associated with said device;
determining from said sensed light the *movement* of said finger, and
using said sensed finger movement information, controlling said device in accordance with said command.

* * *

4. A method according to claim 1, *wherein said movement is sensed in 3 dimensions.*

Plaintiff argues that Defendants' proposal of "determined" improperly modifies the disputed term, but the disputed term refers to "said movement," which refers back to movement determined in the "determining" step recited in Claim 1. Defendants' proposal of "determined" is therefore appropriate.

As to Defendants' proposal of "three perpendicular axes," however, Defendants' proposal lacks sufficient support in the intrinsic evidence. To whatever extent such a feature can be gleaned from the specification, this is a specific feature of particular embodiments that should not be imported into the disputed term. *See Phillips*, 415 F.3d at 1323.

The Court accordingly hereby construes **“wherein said movement is sensed in 3 dimensions”** to mean **“wherein said movement is determined in 3 dimensions.”**

8. “wherein said information is obtained in 3 dimensions”

“wherein said information is obtained in 3 dimensions” (’431 Patent, Claim 19)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary	“wherein said information is obtained with respect to three perpendicular axes”

(Dkt. No. 55, App’x 1 at 7; Dkt. No. 73, Ex. A, at 7.)

(1) The Parties’ Positions

Plaintiff argues that “[a]s with the previous term, Defendants seek to improperly impose a specific coordinate system on this term, when no such requirement is recited in the claims or required by the intrinsic record.” (Dkt. No. 64, at 14.)

Defendants respond as to this disputed term together with the term “wherein said movement is sensed in 3 dimensions,” which is addressed above. (*See* Dkt. No. 70, at 10–11.)

Plaintiff replies as to this disputed term together with the term “wherein said movement is sensed in 3 dimensions,” which is discussed above. (*See* Dkt. No. 72, at 5.)

(2) Analysis

This disputed term appears in Claim 19 of the ’431 Patent, which depends from Claim 14, and Claims 14 and 19 recite (emphasis added):

14. A method for controlling a handheld computing device comprising the steps of:
 - providing a computer within said device;
 - associating a camera with said device, said camera viewing at least a portion of the body of a user operating said device or an object held by said user, in order provide image data concerning said portion or object;

using said computer, analyzing said image data to *determine* information concerning a user input command; and
from said determined information, controlling a function of said device.

* * *

19. A method according to claim 14, *wherein said information is obtained in 3 dimensions*.

The parties present arguments as to this term together with their arguments as to the term “wherein said movement is sensed in 3 dimensions,” and for the same reasons set forth above as to that term the Court rejects Defendants’ proposal of “three perpendicular axes.” Also, Defendants include the word “obtained” in their construction, and the Court agrees that no construction is necessary as to the word “obtained.”

The Court therefore hereby expressly rejects Defendants’ proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**wherein said information is obtained in 3 dimensions**” to have its **plain meaning**.

9. “electro-optically sensing” and “electro-optical sensing”

“electro-optically sensing” (’431 Patent, Claim 1)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“sensing [light reflected from said at least one finger] by measuring changes to an electric field”

“electro-optical sensing” (’431 Patent, Claim 2)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“sensing light reflected from said at least one finger by measuring changes to an electric field”

(Dkt. No. 55, App’x 1, at 7; Dkt. No. 73, Ex. A, at 2 & 3.)

(1) The Parties’ Positions

Plaintiff argues that Defendants’ proposal of changing “electro-optical” to “electric” is “improper absent a clear and unmistakable disclaimer” and “reads out specifically contemplated embodiments.” (Dkt. No. 64, at 15.)

Defendants respond that “[a]lthough the patent does not explain what it means to ‘electro-optically sense’ light, Defendants’ proposal reflects how ‘electro-optic’ terms are defined by technical dictionaries and would clarify this technical term for the benefit of the jury.” (Dkt. No. 70, at 11 (citations omitted).)

Plaintiff replies that “Defendants’ response brief fails to provide any substantive analysis to support their position, which seeks to depart from the unambiguous claim language.” (Dkt. No. 72, at 5 (citation omitted).)

At the September 21, 2021 hearing, Plaintiff submitted that many electro-optical sensors do not measure “changes,” and Plaintiff argued that Defendants’ proposed construction would exclude disclosed embodiments because visible light is not an electric field. Defendants submitted that although its cited extrinsic dictionary definitions may not be directly on point, construction is appropriate because these terms are not commonly understood.

(2) Analysis

These disputed terms appear in Claims 1 and 2 of the '431 Patent, which recite (emphasis added):

1. A method for controlling a handheld computing device comprising the steps of:
 - holding said device in one hand;
 - moving at least one finger in space in order to signal a command to said device;
 - electro-optically sensing* light reflected from said at least one finger using a sensing means associated with said device;
 - determining from said sensed light the movement of said finger, and
 - using said sensed finger movement information, controlling said device in accordance with said command.
2. A method according to claim 1, wherein at least one camera is utilized to effect *said electro-optical sensing*.

By referring to “*said electro-optical sensing*” in Claim 2, the patentee thus used “electro-optically sensing” and “electro-optical sensing” as synonyms.

As to the meaning of these terms, Defendants rely on extrinsic technical dictionaries. The first of these defines “electro-optic effect” and “electro-optic field meter” in terms of “[a] change in the refractive index of a material under the influence of an electric field” and “[a] meter that measures changes in the transmission of light through a fiber or crystal due to the influence of the electric field,” respectively, neither of which is germane to the claims here at issue. (Dkt. No. 70, Ex. K, *The IEEE Standard Dictionary of Electrical and Electronics Terms* 349 (6th ed. 1996).) The other technical dictionary cited by Defendants similarly sets forth definitions, such as regarding refraction of light through a material, that do not appear to inform the meaning of the disputed terms as used in the claims here at issue. (*See id.*, Ex. L, *McGraw Hill Dictionary of Scientific and Technical Terms* 665–66 (5th ed. 1994).)

On balance, Defendants’ proposal of “measuring changes to an electric field” lacks sufficient support in either the intrinsic or extrinsic evidence, and the Court hereby expressly rejects Defendants’ proposed construction. No further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**electro-optically sensing**” and “**electro-optical sensing**” to have their **plain meaning**.

10. “oriented to view”

<p style="text-align: center;">“oriented to view” (’924 Patent, Claim 1)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“having a field of view encompassing”

(Dkt. No. 55, App’x 1, at 9; Dkt. No. 73, Ex. A, at 8.)

(1) The Parties’ Positions

Plaintiff argues that “[o]riented’ and ‘to view’ are simple terms that even a lay juror would understand and be able to apply in determining infringement.” (Dkt. No. 64, at 15.)

Defendants respond that “Defendants seek to construe this limitation to clarify that it describes a present structural configuration, namely that the camera is positioned such that the subject (a user or an object other than the user) is currently within the camera’s field of view, not merely that the camera may later be oriented to view the subject.” (Dkt. No. 70, at 11; *see id.* at 11–13.)

Plaintiff replies by reiterating that “[o]riented’ and ‘to view’ are simple terms that even a lay juror would understand and apply in determining infringement.” (Dkt. No. 72, at 5.)

(2) Analysis

Claim 1 of the '924 Patent recites (emphasis added):

1. A handheld device comprising:
 - a housing;
 - a computer within the housing;
 - a first camera *oriented to view* a user of the handheld device and having a first camera output; and
 - a second camera *oriented to view* an object other than the user of the device and having a second camera output, wherein the first and second cameras include non-overlapping fields of view, and wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output.

The specification discloses:

Consider hand held computer 1901 of FIG. 18, incorporating a camera 1902 which can optionally be rotated about axis 1905 so as to look at the user or a portion thereof such as finger 1906, or at objects at which it is pointed. Optionally, and often desirably, a stereo pair of cameras to further include camera 1910 can also be used. It too may rotate, as desired. Alternatively fixed cameras can be used when physical rotation is not desired, for ruggedness, ease of use, or other reasons (noting that fixed cameras have fixed *fields of view*, which limit versatility in some cases).

When aimed at the user, as shown, it can be used, for example, to *view and obtain images of*:

One[']s self—facial expression etc, also for image reasons—id. etc. combined effect.

One[']s fingers (any or all), one finger to other and the like. This in turn allows conversing with the computer in a form of sign language which can replace the keyboard of a conventional computer.

One or more objects in one[']s hand. Includes a pencil or pen—and thus can be used rather than having a special touch screen and pencil if the pencil itself is tracked as disclosed in the above figure. It also allows small children to use the device, and those who cannot hold an ordinary stylus.

One[']s gestures.

The camera 1902 (and 1910 if used, and if desired), can also be optionally rotated and used to *view* points in space ahead of the device, as shown in dotted lines 1902a. In this position for example it can be used for the purposes described in

the previous application. It can also be used to observe or point at (using optional laser pointer 1930) [p]oints such as 1935 on a wall or a mounted [] LCD or projection display such as 1940 on a wall or elsewhere such as on the back of an airline seat.

'924 Patent at 25:40–26:5 (emphasis added).

Although the specification thus refers to “field of view,” Defendants’ proposal of “having a field of view encompassing” would appear to require that the recital of “oriented to view an object other than the user” precludes the user from being within the field of view of the second camera in above-reproduced Claim 1. Defendants do not sufficiently justify this narrow interpretation. That is, the specification reveals no special definition that would differ from how the phrase “oriented to view” would be used in common parlance, and this meaning would be readily understood to refer to orienting to view one thing rather than another thing while still allowing for some or all of both to be within the field of view. *See Phillips*, 415 F.3d at 1314 (“In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.”).

The Court therefore hereby expressly rejects Defendants’ proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

To be clear, however, this disputed term refers to actual configuration, not merely a capability. The *Optimum Imaging* case cited by Plaintiff does not compel otherwise. *See Optimum Imaging Techs. LLC v. Canon Inc.*, No. 2:19-CV-246-JRG, Dkt. No. 88, 2020 WL 3104290, at *24 (E.D. Tex. June 11, 2020) (“Often, in apparatus claims the issue reduces to

whether functional limitations describe the capability of components in apparatus rather than method steps that recite actual use.”) (citations omitted).

With that understanding, the Court hereby construes “**oriented to view**” to have its **plain meaning**.

11. “oriented to view a user”

<p style="text-align: center;">“oriented to view a user” (’924 Patent, Claim 1)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary	Indefinite under <i>IPXL Holdings, LLC v. Amazon.com, Inc.</i> , 430 F.3d 1377 (Fed. Cir. 2005).

(Dkt. No. 55, App’x 1, at 9; Dkt. No. 73, Ex. A, at 8–9.)

(1) The Parties’ Positions

Plaintiff argues that “[t]he context of Claim 1 makes clear that it is *not* claiming both an apparatus and method of use . . .,” and “[t]he disputed term is merely describing the direction in which the first camera is facing.” (Dkt. No. 64, at 16–17.)

Defendants respond that “Claim 1 of the ’924 Patent is an apparatus claim with limitations requiring a method of using the claimed device,” which “impermissibly mixes an apparatus and a method of using the apparatus.” (Dkt. No. 70, at 13 & 16; *see id.* at 13–16.)

Plaintiff replies that “[t]he orientation of the first and second cameras in claim 1 of the ’924 Patent makes them capable of viewing the user of the handheld device and an object other than the user of the device, respectively,” and “the claim clearly recites capability, not performance of a method step.” (Dkt. No. 72, at 6.)

At the September 21, 2021 hearing, Plaintiff emphasized that Defendants bear the burden of showing indefiniteness by clear and convincing evidence. Plaintiff also submitted that although the claim refers to a user, the user is not recited as performing any action. Plaintiff argued that having any part of the user in the field of view is sufficient for this term, and Plaintiff urged that there is simply a factual question regarding how the cameras are arranged. Defendants responded that a person of ordinary skill in the art cannot determine whether an accused device is infringing because the user can change the orientation of the device and its cameras during ordinary use.

(2) Analysis

A single patent may include claims directed to one or more of the classes of patentable subject matter, but no single claim may cover more than one subject matter class. *IPXL Holdings[, LLC v. Amazon.com, Inc.]*, 430 F.3d [1377,] 1384 [(Fed. Cir. 2005)] (holding indefinite a claim covering both an apparatus and a method of using that apparatus).

Microprocessor Enhancement Corp. v. Tex. Instruments Inc., 520 F.3d 1367, 1374 (Fed. Cir. 2008); *see H-W Tech, L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1335 (Fed. Cir. 2014) (finding claim indefinite because “it is unclear when infringement occurs”).

Claim 1 of the '924 Patent recites (emphasis added):

1. A handheld device comprising:
 - a housing;
 - a computer within the housing;
 - a first camera *oriented to view a user* of the handheld device and having a first camera output; and
 - a second camera oriented to view an object other than the user of the device and having a second camera output, wherein the first and second cameras include non-overlapping fields of view, and wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output.

The disputed term relates to configuration of the recited first camera rather than, for example, any user action or any action performed by or on the camera. Defendants' reliance on

In re Katz, *H-W Technology*, and *UltimatePointer* is unpersuasive. *See In re Katz*, 639 F.3d at 1318 (finding “interface means for providing automated voice messages . . . to certain of said individual callers, wherein said certain of said individual callers digitally enter data” indefinite); *see also H-W Tech.*, 758 F.3d at 1336 (finding “tangible computer readable medium” claims indefinite because of recitals that “said user completes a transaction” and “said user selects one of said variety of offers”); *UltimatePointer, L.L.C. v. Nintendo Co.*, No. 6:11-CV-496, 2013 WL 2325118, at *22–*23 (E.D. Tex. May 28, 2013) (Davis, J.). Defendants’ argument that “[w]hether the camera is oriented to view a user cannot be determined until a user actually uses the device in a particular way” is likewise unavailing. (Dkt. No. 70, at 14; *see id.* at 13–16.) Defendants do not persuasively show that this requires performance of an action by the user rather than a configuration of the device.

Defendants thus have not met their burden to show indefiniteness by clear and convincing evidence. *See Sonix*, 844 F.3d at 1377. The Court therefore hereby expressly rejects Defendants’ indefiniteness argument, and Defendants present no alternative proposed construction. To be clear, however, this disputed term refers to actual configuration, not merely a capability.

With that understanding, the Court hereby construes “**oriented to view a user**” to have its **plain meaning**.

12. “oriented to view an object other than the user”

“oriented to view an object other than the user” (’924 Patent, Claim 1)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	Indefinite under <i>IPXL Holdings, LLC v. Amazon.com, Inc.</i> , 430 F.3d 1377 (Fed. Cir. 2005).

(Dkt. No. 55, App’x 1, at 9; Dkt. No. 73, Ex. A, at 9.)

(1) The Parties’ Positions

Plaintiff argues: “For the same reasons discussed above with respect to ‘oriented to view a user,’ Defendants’ assertion that this claim is indefinite under *IPXL* is also wrong. The term ‘oriented to view an object other than the user’ is merely describing the orientation of the second camera.” (Dkt. No. 64, at 17.)

Defendants respond as to this disputed term together with the term “oriented to view a user,” which is addressed above. (Dkt. No. 70, at 13–16.)

Plaintiff replies as to this disputed term together with the term “oriented to view a user,” which is addressed above. (*See* Dkt. No. 72, at 5–7.)

(2) Analysis

As set forth above regarding the similar term “oriented to view a user” in the same claim, Defendants have not met their burden to show indefiniteness by clear and convincing evidence. *See Sonix*, 844 F.3d at 1377.

The Court therefore hereby expressly rejects Defendants’ indefiniteness argument, and Defendants present no alternative proposed construction. To be clear, however, this disputed term refers to actual configuration, not merely a capability.

With that understanding, the Court hereby construes “**oriented to view an object other than the user**” to have its **plain meaning**.

13. “wherein the gesture is performed by a person other than the user of the handheld device”

“wherein the gesture is performed by a person other than the user of the handheld device” (’924 Patent, Claim 9)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	Indefinite under <i>IPXL Holdings, LLC v. Amazon.com, Inc.</i> , 430 F.3d 1377 (Fed. Cir. 2005).

(Dkt. No. 55, App’x 1, at 10; Dkt. No. 73, Ex. A, at 14.)

(1) The Parties’ Positions

Plaintiff argues that “the term does not recite functional language,” and “[i]nstead, it is describing that the gesture detected by the computer is performed by a user other than the user of the handheld device.” (Dkt. No. 64, at 18.)

Defendants respond that “Claim 9 does not merely recite the capability of determining a gesture,” but rather “Claim 9 further expressly specifies that the gesture *is performed* by a specific person, thereby reciting a method step.” (Dkt. No. 70, at 16–17.)

Plaintiff replies: “Claim 9 does nothing more than further define and narrow the scope of the capability recited in claim 6—the computer must be operable to determine a gesture performed by a person other than the user of the handheld device. It does not require actual performance of a gesture.” (Dkt. No. 72, at 7.)

At the September 21, 2021 hearing, Plaintiff argued that this dependent claim does not recite an action but instead, when read in light of the claims from which it depends, merely narrows down the class of gestures that can be determined.

(2) Analysis

This disputed term appears in Claim 9 of the '924 Patent, which depends from Claim 6, which in turn depends from Claim 1. Claims 1, 6, and 9 of the '924 Patent recite (emphasis added):

1. A handheld device comprising:
 - a housing;
 - a computer within the housing;
 - a first camera oriented to view a user of the handheld device and having a first camera output; and
 - a second camera oriented to view an object other than the user of the device and having a second camera output,wherein the first and second cameras include non-overlapping fields of view, and wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output.

* * *

6. The handheld device of claim 1 wherein the computer is operable to *determine a gesture* based on at least one of the first camera output and the second camera output.

* * *

9. The handheld device of claim 6 *wherein the gesture is performed by a person other than the user of the handheld device.*

At first blush, the disputed term in Claim 9 could be read as referring to configuration, because “the gesture” in Claim 9 refers back to “a gesture” in Claim 6 that “the computer is operable to determine.”

Yet, the limitation added by Claim 9 expressly recites that the gesture “is performed.” On balance, this limitation added in Claim 9 is directed to actual use, not merely configuration.

This renders the claim indefinite. *See In re Katz*, 639 F.3d at 1318 (finding “interface means for providing automated voice messages . . . to certain of said individual callers, wherein said certain of said individual callers digitally enter data” indefinite); *see also H-W Tech.*, 758 F.3d at 1336 (finding indefiniteness of “tangible computer readable medium” claims because of recitals that “said user completes a transaction” and “said user selects one of said variety of offers”).

The Court thus hereby finds that **“wherein the gesture is performed by a person other than the user of the handheld device”** is indefinite.

14. “a computer within the housing . . . wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output”

<p>“a computer within the housing . . . wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output” (’924 Patent, Claims 1, 6–8, 10, 12, 14)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.</p>	<p>Means-plus-function</p> <p>Function:</p> <p>“perform a control function of the handheld device based on at least one of the first camera output and the second camera output”</p> <p>The dependent claims currently asserted by Plaintiff add additional functions, including:</p> <p>(1) “determine a gesture based on at least one of the first camera output and the second camera output” (Claim 6);</p> <p>(2) “determine a facial expression based on at least one of the first camera output and the second camera output” (Claim 7);</p> <p>(3) “determine at least one of the position and the orientation of the object based on the second camera output” (Claim 8);</p> <p>(4) “recognize the object based on the second camera output” (Claim 10);</p> <p>(5) “determine a reference frame of the object” (Claim 12)</p> <p>(6) “transmit information over an internet connection” (Claim 14)</p> <p>Structure:</p> <p>Indefinite</p>

(Dkt. No. 55, App’x 1, at 10; Dkt. No. 73, Ex. A, at 10–11.)

(1) The Parties’ Positions

Plaintiff argues that Defendants cannot overcome the presumption that this non-means term is *not* governed by 35 U.S.C. § 112, ¶ 6, and “[i]n light of the claim language itself and the specification, the term recites sufficiently definite structure.” (Dkt. No. 64, at 18–19.) Plaintiff argues that the words “computer” and “housing” connote structure. (*Id.* at 19.)

Defendants respond that “the claim does not recite sufficient structure for performing the claimed function, or those recited in the dependent claims, because ‘a computer’ without the necessary software is not capable of performing those functions.” (Dkt. No. 70, at 17.) Defendants argue: “The claim does not describe the computer’s operations, specifically how it uses the camera outputs to control the handheld device. Nor does the claim recite structural connections between the computer and other components. Placing the computer ‘within the [device] housing’ does not change its purely functional, black-box nature.” (*Id.*, at 18.)

Plaintiff replies that “the term ‘computer’ has sufficient structure,” and “[t]he claim recites sufficient structure because it also recites how the computer is adapted to perform a control function—it uses at least one of the first camera output and the second camera output.” (Dkt. No. 72, at 8.)

At the September 21, 2021 hearing, Defendants argued that the authorities cited by Plaintiff are distinguishable, and the parties again debated the significance of the *T-Netix* case. *See* 2003 WL 25782759, at *9.

(2) Analysis

Claim 1 of the ’924 Patent recites (emphasis added):

1. A handheld device comprising:

a housing;
a computer within the housing;
 a first camera oriented to view a user of the handheld device and having a first camera output; and
 a second camera oriented to view an object other than the user of the device and having a second camera output,
 wherein the first and second cameras include non-overlapping fields of view, and *wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output.*

Defendants' argument boils down to an argument that the word "computer" does not connote structure.

Although the term "computer" may refer to a broad class of structures, this breadth does not necessarily render the term non-structural. *See Skky*, 859 F.3d at 1019 (finding "wireless device means" not a means-plus-function term, noting that "it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function") (quoting *TecSec*, 731 F.3d at 1347).

Defendants cite this Court's decision in *St. Isidore*, which found that the presumption against means-plus-function treatment under 35 U.S.C. § 112, ¶ 6 had been rebutted because "[i]n the context of the 'processor configured to . . . ' terms, . . . each processor is defined only by the function that it performs." *St. Isidore Research, LLC v. Comerica Inc.*, No. 2:15-CV-1390-JRG-RSP, 2016 WL 4988246, at *14 (E.D. Tex. Sept. 19, 2016). *St. Isidore* itself noted that "[t]he Court has typically found 'processor' to connote sufficient structure to avoid the application of § 112, ¶ 6 in different circumstances." *Id.*, at *15. The Court's analysis in the *SyncPoint* case is applicable. *See SyncPoint Imaging, LLC v. Nintendo of Am. Inc.*, No. 2:15-CV-247, 2016 WL 55118, at *18–*21 (E.D. Tex. Jan. 5, 2016).

A recent decision of the Federal Circuit is in accord:

As used in the claims of the '591 patent, the term “digital processing unit” clearly serves as a stand-in for a “general purpose computer” or a “central processing unit,” each of which would be understood as a reference to structure in this case, not simply any device that can perform a particular function.

Samsung, 948 F.3d at 1354.

The Court therefore applies the presumption against means-plus-function treatment for this non-means term, and the Court hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

Defendants present no alternative proposed construction. The Court accordingly hereby construes **“a computer within the housing . . . wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output”** to have its **plain meaning**.

15. “gesture”

<p style="text-align: center;">“gesture” ('924 Patent, Claims 6, 9; '079 Patent, Claims 1, 4–5, 11, 18–21, 24–25; '949 Patent, Claims 1–3, 8–10, 13–15)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“a sequence of positions that conveys a meaning”

(Dkt. No. 55, App’x 1, at 11, 13 & 17; Dkt. No. 73, Ex. A, at 13, 15 & 27.)

(1) The Parties’ Positions

Plaintiff argues that “[g]esture’ is a simple term that a lay juror would understand and be able to apply in determining infringement.” (Dkt. No. 64 at 19.) Also, Plaintiff argues that Defendants’ proposal of “conveys a meaning” should be rejected because “[n]othing in the

specification or the prosecution history supports such a construction,” and “[g]estures can be made without an associated meaning.” (*Id.*)

Defendants respond that “Defendants seek to clarify the plain meaning of ‘gesture’ because GTP’s infringement contentions accuse features that merely involve scanning a stationary object, such as iris scanning, of somehow detecting a gesture.” (Dkt. No. 70 at 19.) Defendants argue that “[i]t is well understood that a gesture requires movement, and the specification confirms that is the meaning intended here,” and “[w]hat distinguishes a gesture from other movement is that it conveys a meaning to an observer.” (*Id.*; *see id.* at 21 (regarding the ’079 Patent); *see also id.* at 25–26 (regarding the ’949 Patent).)

Plaintiff replies that “Defendants fail to assert, let alone show, that a lay juror would not understand the term ‘gesture,’” and “Defendants fail to identify any reason to depart from the plain and ordinary meaning of the term.” (Dkt. No. 72, at 8 (citation omitted).)

At the September 21, 2021 hearing, Plaintiff argued that although movement may be required to form a gesture, a gesture itself does not necessarily require movement. In response, Defendants noted prosecution history of the ’949 Patent in which the patent examiner discussed gestures in terms of “movements.” (*See* Dkt. No. 70, Ex. S, May 14, 2014 Office Action, at 2.) Defendants also submitted that “sequence of positions” is a phrase used in the patents but is not critical to Defendants’ proposed construction.

(2) Analysis

This disputed term appears, for example, in Claim 6 of the ’924 Patent, which depends from Claim 1. Claims 1 and 6 of the ’924 Patent recite (emphasis added):

1. A handheld device comprising:
 - a housing;
 - a computer within the housing;

a first camera oriented to view a user of the handheld device and having a first camera output; and

a second camera oriented to view an object other than the user of the device and having a second camera output,

wherein the first and second cameras include non-overlapping fields of view, and wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output.

* * *

6. The handheld device of claim 1 wherein the computer is operable to determine a *gesture* based on at least one of the first camera output and the second camera output.

First, the parties dispute whether a “gesture” requires movement. The specification distinguishes between “facial expressions” and “gestures.” *See* ’924 Patent at 22:9–12 (“In this case, it is facial expressions, hand or body gestures that are the thing most used.”); *see also id.* at 25:40–63 (“facial expressions” referred to separately from “gestures”). Because a facial expression does not necessarily require movement, this distinction between “facial expressions” and “gestures,” is consistent with Defendants’ proposal that a “gesture” requires movement.

Admittedly, “facial expressions” and “gestures” could also be distinguished from one another based on “facial expressions” involving positions of elements of a face and “gestures” involving “hand or body” parts. *See id.* at 22:9–12. Still, the patents-in-suit also distinguish between “position” and “gesture,” thus further implying that the term “gesture” connotes movement. *See also* ’949 Patent at 5:45 (“poses or gesture”) & 5:46–47 (“position or gesture”).

Also, because “gesture” is being used according to its meaning in common parlance rather than according to any specialized technical meaning, “[i]n such circumstances[] general purpose dictionaries may be helpful.” *Phillips*, 415 F.3d at 1314. Defendants submit general-purpose dictionaries that define “gesture,” in the context of a human body (as opposed to, for example, a “gesture of goodwill”), in terms of movement. (*See* Dkt. No. 70, Ex. N, *The Concise*

Oxford Dictionary of Current English 568 (9th ed. 1995) (“a movement of a limb or the body as an expression of thought or feeling”); *id.*, Ex. O, *Merriam-Webster’s Collegiate Dictionary* 489 (10th ed. 1995) (“a movement usu. of the body or limbs that expresses or emphasizes an idea, sentiment, or attitude”; “the use of motions of the limbs or body as a means of expression”).)

These definitions also define “gesture” in terms of conveying meaning. This understanding is reinforced by the other contexts in which the term “gesture” might be used, such as the above-mentioned “gesture of goodwill,” which can refer to an action intended to convey a positive intention or feeling. (See Dkt. No. 70, Ex. N, *The Concise Oxford Dictionary of Current English* 568 (9th ed. 1995).) The patents-in-suit also use “gesture” consistent with this ordinary usage in which this term connotes conveying meaning. See, e.g., ’079 Patent at 5:24–28 (“There are many gestures of babies apparently indicated in child psychology as being quite indicative of various needs, wants, or feelings and emotions, etc. These gestures are typically made with the baby’s hands.”).

The Court therefore hereby construes **“gesture”** to mean **“movement of hands or other body parts that conveys meaning.”**

16. “adapted to”

“adapted to” (’924 Patent, Claims 1, 3–5, 8, 10, 12, 14)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	computer: “programmed to” first and second cameras: “designed to”

<p style="text-align: center;">“adapted to” (’079 Patent, Claims 1, 11, 21)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	light source: “designed to” processor: “programmed to”
<p style="text-align: center;">“adapted to” (’949 Patent, Claims 1, 13)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	digital camera, sensor: “designed to” processor: “programmed to”

(Dkt. No. 55, App’x 1, at 12, 15 & 22; Dkt. No. 73, Ex. A, at 12, 21 & 36.)

(1) The Parties’ Positions

Plaintiff argues that “[a]dapted to” should be given the same meaning across all claims,” and this term “is well understood and does not require construction.” (Dkt. No. 64, at 19.)

Defendants respond that “[a] computer designed to perform a function must be specifically ‘programmed to’ perform it.” (Dkt. No. 70, at 20 (citation omitted); *see id.* at 24 (regarding the ’079 Patent); *see also id.* at 30 (regarding the ’949 Patent).)

Plaintiff replies that “Defendants find no support for their differing constructions of this unambiguous term. Nor do they identify any basis, in the intrinsic record or otherwise, to depart from its plain and ordinary meaning.” (Dkt. No. 72, at 8 (citation omitted).)

At the September 21, 2021 hearing, Plaintiff argued that this disputed term has a broad meaning that includes “capable of.” Defendants responded that capability is not sufficient, and Defendants alternatively proposed “configured to.” Defendants cited the Court’s analysis in

Barkan Wireless IP Holdings, L.P. v. Samsung Elecs. Co., No. 2:18-CV-28-JRG, Dkt. No. 105, 2019 WL 497902, at *39–*40 (E.D. Tex. Feb. 7, 2019).

(2) Analysis

Claim 1 of the '924 Patent, for example, recites (emphasis added):

1. A handheld device comprising:
 - a housing;
 - a computer within the housing;
 - a first camera oriented to view a user of the handheld device and having a first camera output; and
 - a second camera oriented to view an object other than the user of the device and having a second camera output,wherein the first and second cameras include non-overlapping fields of view, and wherein the computer is *adapted to* perform a control function of the handheld device based on at least one of the first camera output and the second camera output.

The Court hereby expressly rejects any argument by Plaintiff that the term “adapted to,” as used in the claims here at issue, encompasses mere capability. *See, e.g., Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012) (“Amended claim 23 refers to the arms and magnetic members as ‘adapted to extend across respective side portions’ of a primary frame. In that context, the phrase ‘adapted to’ is most naturally understood to mean that the arms and magnetic members are designed or configured to accomplish the specified objective, not simply that they can be made to serve that purpose.”); *Barkan Wireless*, 2019 WL 497902, at *39–*40.

This finding is not needed to assist the finder of fact as part of an express claim construction. Rather, it is sufficient that the Court’s finding will constrain the experts in their analysis of these claims. Thus, Defendants’ proposals such as “programmed to” and “designed to” are unnecessary and would tend to confuse rather than clarify the claims for the finder of fact. Further, even though Defendants explained at the September 21, 2021 hearing that Defendants

propose “designed to” as referring to structural design rather than any manufacturer’s intent, Defendants’ proposal of “designed to” would potentially introduce an element of subjective intent and is therefore disfavored.

The Court therefore hereby expressly rejects Defendants’ proposed constructions (and, as set forth above, the Court expressly rejects any argument by Plaintiff that the term “adapted to,” as used in the claims here at issue, encompasses mere capability), and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**adapted to**” to have its **plain meaning**.

17. “light source adapted to direct illumination through a work volume above the light source,” “light source adapted to illuminate a human body part within a work volume generally above the light source,” and “light source in fixed relation relative to the camera and adapted to direct illumination through the work volume”

<p>“light source adapted to direct illumination through a work volume above the light source” (’079 Patent, Claims 1–3, 9–10)</p> <p>“light source adapted to illuminate a human body part within a work volume generally above the light source” (’079 Patent, Claims 11, 14–15)</p> <p>“light source in fixed relation relative to the camera and adapted to direct illumination through the work volume” (’079 Patent, Claims 21–23, 30)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	<p>“a light source designed to transmit light directly through a work volume above the component”</p> <p>“a light source designed to transmit light directly onto a human body part within a work volume generally above the component”</p> <p>“a light source in fixed relation relative to the camera and designed to transmit light directly through the work volume”</p>

(Dkt. No. 55, App’x 1, at 13; Dkt. No. 73, Ex. A, at 17–18.)

(1) The Parties’ Positions

Plaintiff argues:

While Defendants propose these phrases for construction, they actually seek construction of the terms “adapted to,” “direct illumination,” and “illuminate.” As discussed above, “adapted to” is well-understood and requires no construction. Additionally, as discussed above with respect to the similar term in the ’431 Patent, Defendants seek to change the claims from directing illumination to “transmitting” light directly onto a body part or through a work volume. That change finds no support in the claim language or the specification. Nothing in the claim language or the specification excludes illumination through other means.

As the claims recite, the light source must simply illuminate. Therefore, Defendants' proposed construction should be rejected.

(Dkt. No. 64, at 20.)

Defendants respond that “[s]imilar to the ’431 Patent, the ’079 Patent claims do not recite just any ‘light source,’ but rather a light source adapted to direct illumination through a work volume or to illuminate a human body part in a work volume.” (Dkt. No. 70, at 21–22.) Further, Defendants argue that “[t]he specification also consistently distinguishes the claimed light source from a display.” (*Id.*, at 22.) “Moreover,” Defendants argue, “the term ‘adapted to’ connotes more than the mere capability of directing illumination through the work volume to illuminate a body part, but requires something structurally designed to do so, consistent with the patent distinguishing a light source from a display.” (*Id.*)

Plaintiff replies as to these disputed terms together with the term “a light source for illuminating said object,” which is discussed above. (*See* Dkt. No. 72, at 4.)

(2) Analysis

Claim 11 of the ’079 Patent, for example, recites (emphasis added):

11. A computer apparatus comprising:
 a *light source adapted to illuminate a human body part within a work volume generally above the light source*;
 a camera in fixed relation relative to the light source and oriented to observe a gesture performed by the human body part in the work volume; and
 a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output.

12. The computer apparatus of claim 11 further including a *display* and a keyboard, wherein the work volume is above the keyboard and in front of the display.

The term “adapted to” is discussed separately above, and also Defendants do not persuasively justify construing “direct illumination” and “illuminate” to mean “transmit light.” Defendants argue that the recited “light source” cannot be a display, as Defendants similarly

argue as to the above-addressed term “a light source for illuminating said object” in Claim 12 of the ’431 Patent. Defendants also point out that above-reproduced Claims 11 and 12 distinguish between a “light source” and a “display.”

But although a “light source” would not necessarily satisfy the “display” requirement, Defendants do not demonstrate that a “display” can never serve as a “light source” for purposes of these disputed terms. That is, the terms “light source” and “display” have readily distinguishable scope without precluding a “display” from serving as a “light source.”

The Court therefore hereby expressly rejects Defendants’ proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes **“light source adapted to direct illumination through a work volume above the light source,” “light source adapted to illuminate a human body part within a work volume generally above the light source,” and “light source in fixed relation relative to the camera and adapted to direct illumination through the work volume”** to have their **plain meaning**.

18. “a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output”

“a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output” (’079 Patent, Claim 11)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.	Means-plus-function Function: “determine the gesture performed in the work volume and illuminated by the light source based on the camera output” The dependent claims currently asserted by Plaintiff further add to the function, including: (1) determining a pointing gesture (Claim 19) Structure: Indefinite

(Dkt. No. 55, App’x 1, at 14; Dkt. No. 73, Ex. A, at 20.)

(1) The Parties’ Positions

Plaintiff argues that Defendants cannot overcome the presumption that this non-means term is not governed by 35 U.S.C. § 112, ¶ 6. (Dkt. No. 64, at 20.) Plaintiff argues that “processor” connotes structure, “[a] POSITA would also understand that the claimed ‘a processor’ is operatively coupled to the sensor and to the digital camera,” and “[t]he claim provides the objectives and operations of the processor” (*Id.* at 22.)

Defendants respond that “[s]imilar to the ’924 Patent ‘computer’ term, the ’079 Patent ‘processor’ term fails to recite sufficient structure for performing the claimed, software-implemented function.” (Dkt. No. 70, at 23 (citation omitted).) Defendants argue that

“[d]etermining a gesture based on analysis of an image requires software steps that are not recited in the claim.” (*Id.* (citation omitted).)

Plaintiff replies: “Claim 11 specifically states that the processor is connected to the output of the camera. The camera outputs a gesture, performed by a human body part in the work volume, to the processor. And the processor determines the gesture that was performed. Thus, as with the ‘computer’ terms, the recited function provides sufficient structure” (Dkt. No. 72, at 9.)

(2) Analysis

Claim 11 of the ’079 Patent recites (emphasis added):

11. A computer apparatus comprising:
 a light source adapted to illuminate a human body part within a work volume generally above the light source;
 a camera in fixed relation relative to the light source and oriented to observe a gesture performed by the human body part in the work volume; and
 a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output.

Defendants argue that the word “processor” does not connote structure.

Although the term “processor” may refer to a broad class of structures, this breadth does not necessarily render the term non-structural. *See Skky*, 859 F.3d at 1019 (finding “wireless device means” not a means-plus-function term, noting that “it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function”) (quoting *TecSec*, 731 F.3d at 1347).

Defendants cite this Court’s decision in *St. Isidore*, which found that the presumption against means-plus-function treatment under 35 U.S.C. § 112, ¶ 6 had been rebutted because “[i]n the context of the ‘processor configured to . . .’ terms, . . . each processor is defined only by

the function that it performs.” *St. Isidore*, 2016 WL 4988246, at *14. *St. Isidore* itself noted that “[t]he Court has typically found ‘processor’ to connote sufficient structure to avoid the application of § 112, ¶ 6 in different circumstances.” *Id.*, at *15. The Court’s analysis in the *SyncPoint* case is applicable. *See SyncPoint*, 2016 WL 55118, at *18–*21.

A recent decision of the Federal Circuit is in accord:

As used in the claims of the ’591 patent, the term “digital processing unit” clearly serves as a stand-in for a “general purpose computer” or a “central processing unit,” each of which would be understood as a reference to structure in this case, not simply any device that can perform a particular function.

Samsung, 948 F.3d at 1354. Defendants’ reliance on *St. Isidore*, 2016 WL 4988246, at *14–*15, is therefore unpersuasive in the present case. Defendants’ reliance on *Personal Audio* is similarly unpersuasive. *See Personal Audio, LLC v. Apple, Inc.*, No. 9:09-CV-111, 2011 WL 11757163, at *22 (E.D. Tex. Jan. 31, 2011) (Clark J.).

The Court therefore applies the presumption against means-plus-function treatment for this non-means term, and the Court hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

Defendants present no alternative proposed construction. The Court accordingly hereby construes **“a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output”** to have its **plain meaning**.

19. “three-dimensional position”

“three-dimensional position” (’079 Patent, Claims 8, 28)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“a position defined with respect to three perpendicular axes (xyz)”

(Dkt. No. 55, App'x 1, at 15; Dkt. No. 73, Ex. A, at 22.)

(1) The Parties' Positions

Plaintiff argues: “Here again, Defendants seek to limit a term regarding three dimensions to specific coordinate systems, without any support for so narrowing the scope of the term. Accordingly, Defendants’ construction should be rejected for the same reasons discussed above with respect to the term ‘wherein said movement is sensed in 3 dimensions.’” (Dkt. No. 64, at 22.)

Defendants respond that “[a]s with the ’431 Patent, Defendants seek to clarify what is meant by a three-dimensional position,” and “[t]he same arguments presented above apply here and dictate the same result.” (Dkt. No. 70, at 24 (citations omitted).)

Plaintiff replies as to this disputed term together with the term “wherein said movement is sensed in 3 dimensions,” which is discussed above. (*See* Dkt. No. 72, at 5.)

(2) Analysis

For the same reasons discussed above regarding the term “wherein said movement is sensed in 3 dimensions” in Claim 4 of the ’431 Patent, the Court rejects Defendants’ proposal of requiring three perpendicular axes.

The Court therefore hereby expressly rejects Defendants’ proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**three-dimensional position**” to have its **plain meaning**.

20. “work volume above the light source,” “work volume generally above the light source,” and “work volume above the camera”

<p style="text-align: center;">“work volume above the light source” (’079 Patent, Claims 1, 6–7)</p> <p style="text-align: center;">“work volume generally above the light source” (’079 Patent, Claims 11–12)</p> <p style="text-align: center;">“work volume above the camera” (’079 Patent, Claim 21)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	<p>“volume of space above the light source visible to the camera within which gestures are performed”</p> <p>“volume of space generally above the light source visible to the camera within which gestures are performed”</p> <p>“volume of space above the camera visible to the camera within which gestures are performed”</p>

(Dkt. No. 55, App’x 1, at 16; Dkt. No. 73, Ex. A, at 23.)

(1) The Parties’ Positions

Plaintiff argues that “Defendants’ proposal rewrites unambiguous claim language to add new limitations to the claim that do not exist.” (Dkt. No. 64 at 22.)

Defendants respond that “a ‘work volume’ is not just any volume,” and “[t]he claims make clear that a ‘work volume’ is the volume in which gestures are performed and observed by the camera.” (Dkt. No. 70, at 25 (citing ’079 Patent, Cls. 1, 11 & 21).)

Plaintiff replies: “Defendants concede that the meaning of these terms is clear from the claim language. *See* Resp. Br. [Dkt. No. 70] at 25. Accordingly, no construction is required.” (Dkt. No. 72, at 9.)

At the September 21, 2021 hearing, Plaintiff argued that these terms are clear without construction. Defendants responded that clarification is appropriate as to how far above the light source this work volume is. Defendants proposed that this work volume must be a space in which gestures can be detected.

(2) Analysis

Claims 1, 11, and 21 of the ’079 Patent recite (emphasis added):

1. A computer implemented method comprising:
 providing a light source adapted to direct illumination through a *work volume above the light source*;
 providing a camera oriented to *observe a gesture performed in the work volume*, the camera being fixed relative to the light source; and
 determining, using the camera, the gesture performed in *the work volume* and illuminated by the light source.

* * *

11. A computer apparatus comprising:
 a light source adapted to illuminate a human body part within a *work volume generally above the light source*;
 a camera in fixed relation relative to the light source and oriented to *observe a gesture performed by the human body part in the work volume*; and
 a processor adapted to determine the gesture performed in the *work volume* and illuminated by the light source based on the camera output.

* * *

21. A computer implemented method comprising:
 providing a camera oriented to observe a gesture performed in a *work volume above the camera*;
 providing a light source in fixed relation relative to the camera and adapted to direct illumination through the *work volume*; and
 detecting, using the camera, *a gesture* performed by at least one of a user’s fingers and a user’s hand in the *work volume*.

The specification refers to cameras being pointed at a “desired work volume 170,” which is indicated generally by an arrow labeled 170 in Figures 1 and 2. *See* ’079 Patent at 2:39–48 & Figs. 1 & 2; *see also id.* at 4:29–40 (discussing configuration of cameras such that “the nearly full volume over the keyboard area is accommodated”) & 5:14–21 (“workspace 170 above the keyboard”). The specification also refers to detecting movement of fingers within the work volume. *See id.* at 3:4–20 & 3:56–61.

These disclosures, together with the above-italicized context provided by surrounding language in the above-reproduced claims, demonstrate that the relevant “work volume” is a space wherein gestures can be performed and detected.

Defendants also cite another patent that has named inventors that include the named inventor of the patents-in-suit and that refers to “working volume” as “where the sensor system can operate effectively.” (Dkt. No. 70, Ex. P, U.S. Pat. No. 8,405,604 at 9:41–67; *see id.* at 57:64–67 (similar as to “target volume”).) Although this is extrinsic evidence, this understanding of the named inventor in other patents reinforces the above-discussed context provided by surrounding claim language and by the specification as to how the term “work volume” is used in the relevant art. *See Icon Health & Fitness, Inc. v. Polar Electro Oy*, 656 F. App’x 1008 (Fed. Cir. 2016) (“This is precisely the type of extrinsic evidence upon which a district court may rely in analyzing the record before it when construing claim terms.”).

The Court therefore hereby construes these disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
“work volume above the light source”	“space that is above the light source and wherein gestures can be performed and detected”
“work volume generally above the light source”	“space that is generally above the light source and wherein gestures can be performed and detected”
“work volume above the camera”	“space that is above the camera and wherein gestures can be performed and detected”

21. “forward facing portion”

“forward facing portion” ('949 Patent, Claims 1, 8, 13)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	Indefinite

(Dkt. No. 55, App’x 1, at 17; Dkt. No. 73, Ex. A, at 30.)

(1) The Parties’ Positions

Plaintiff argues that “[t]he claim term provides orientation for the first camera—it is not indefinite.” (Dkt. No. 64, at 23.)

Defendants respond:

For example, for a device that has two sets of digital cameras and/or sensors that point in opposite directions, it is impossible to determine which cameras and/or sensors are in the “forward facing” portion of the device. Adding to the confusion, devices (including certain accused products) may be “foldable” where a portion of the device housing that was facing one side later faces another side after the device is folded or unfolded. It is unclear what would be the “forward facing” portion of such devices. The intrinsic evidence does not help, as the specification never uses “forward facing,” and there is no discussion in the prosecution history. This ambiguity is only confirmed by GTP’s infringement contentions, which allege both sides of the accused products are the “forward

facing portion,” even though GTP now acknowledges the term refers to “a certain side.”

(Dkt. No. 70, at 27.)

Plaintiff replies that “Defendants have failed to meet their burden to show by clear and convincing evidence that these terms are indefinite.” (Dkt. No. 72, at 9.)

At the September 21, 2021 hearing, Plaintiff submitted that Defendants commonly use the word “forward” to describe positioning of cameras on devices. Defendants responded that “forward facing” does not appear anywhere in the specification, and Defendants argued that it is not reasonably clear how one could avoid infringement. Defendants also cited the opinions of their expert. (*See* Dkt. No. 70, Ex. F, July 16, 2021 Stevenson Decl., at ¶¶ 112–17.)

(2) Analysis

Claim 1 of the ’949 Patent, for example, recites (emphasis added):

1. A portable device comprising:
 - a device housing including a *forward facing portion*, the *forward facing portion* of the device housing encompassing an electro-optical sensor having a field of view and including a digital camera separate from the electro-optical sensor; and
 - a processing unit within the device housing and operatively coupled to an output of the electro-optical sensor, wherein the processing unit is adapted to:
 - determine a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output, and
 - control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory.

Defendants demand that the phrase “forward facing” must refer to a particular identifiable direction, but the claims here at issue can be readily understood as using “forward facing” merely as a label. This is useful because, for example, dependent Claim 5 recites “[t]he portable device of claim 1 further including a forward facing light source,” so in that context the

phrase “forward facing” provides a common reference that helps the reader understand the relationships among the recited components. Defendants’ additional arguments, such as regarding a “foldable” device (Dkt. No. 70, at 27), thus do not give rise to indefiniteness.

The Court therefore hereby expressly rejects Defendants’ indefiniteness argument, and Defendants submit no alternative proposed construction.

The Court accordingly hereby construes **“forward facing portion”** to have its **plain meaning**.

22. “forward facing light source”

“forward facing light source” ('949 Patent, Claims 5, 16)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	Indefinite

(Dkt. No. 55, App’x 1, at 17; Dkt. No. 73, Ex. A, at 38.)

(1) The Parties’ Positions

Plaintiff argues that “[a]s with the term ‘forward facing portion,’ Defendants have not shown by clear and convincing evidence that this term is indefinite.” (Dkt. No. 64, at 24 (citation omitted).)

Defendants respond as to this disputed term together with the term “forward facing portion,” which is addressed above. (*See* Dkt. No. 70, at 27.)

Plaintiff replies as to this disputed term together with the term “forward facing portion,” which is addressed above. (*See* Dkt. No. 72, at 9.)

(2) Analysis

For the same reasons set forth as to the term “forward facing portion,” discussed above, the Court hereby expressly rejects Defendants’ indefiniteness argument, and Defendants submit no alternative proposed construction.

The Court accordingly hereby construes **“forward facing light source”** to have its **plain meaning**.

23. “the detected gesture is identified by the processing unit apart from a plurality of gestures”

“the detected gesture is identified by the processing unit apart from a plurality of gestures” (’949 Patent, Claim 13)	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	Indefinite, including for lack of antecedent basis

(Dkt. No. 55, App’x 1, at 18–19; Dkt. No. 73, Ex. A, at 39–40.)

(1) The Parties’ Positions

Plaintiff argues that “[t]here is nothing unclear about this claim language, and one of skill in the art would easily understand the scope of the claim,” such as that “[a] POSITA would understand that ‘the detected gesture’ and ‘the gesture detected by the sensor’ refer to ‘a gesture’ that is detected by the sensor.” (Dkt. No. 64, at 25 (citations omitted).)

Defendants respond that “[t]his term is indefinite for lack of antecedent basis because it is unclear whether ‘the detected gesture’ refers to the gesture detected by the sensor (‘a sensor adapted to detect a gesture’) or, instead, the gesture detected by the processing unit (‘wherein the processing unit is adapted to: detect a gesture’).” (Dkt. No. 70, at 28 (citation omitted).) Further, Defendants argue that “[t]his term is also indefinite because it is unclear what it means

to identify a gesture that has already been detected apart from a plurality of other gestures.” (*Id.*, at 28 (citation omitted).)

Plaintiff replies that “[t]here is nothing unclear from this claim language when read in context,” and “Defendants have failed to showing [*sic*] by clear and convincing evidence that the term is indefinite.” (Dkt. No. 72, at 10.)

At the September 21, 2021 hearing, Plaintiff argued that the antecedent basis for “the detected gesture” is “detect a gesture has been performed.” Defendants responded that the claim is unclear by reciting “a sensor adapted to detect a gesture in the *digital camera* field of view” and then reciting to “detect a gesture has been performed in the *electro-optical sensor* field of view.”

(2) Analysis

This disputed term appears in Claim 13 of the ’949 Patent, which recites (emphasis added):

13. An image capture device comprising:
 - a device housing including a forward facing portion, the forwarding facing portion encompassing a digital camera adapted to capture an image and having a field of view and encompassing *a sensor adapted to detect a gesture in the digital camera field of view*; and
 - a processing unit operatively coupled to the sensor and to the digital camera, wherein the processing unit is adapted to:
 - detect a gesture has been performed in the electro-optical sensor field of view* based on an output of the electro-optical sensor, and
 - correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera, wherein *the detected gesture is identified by the processing unit apart from a plurality of gestures*.

Defendants argue that the disputed term lacks a sufficiently clear antecedent basis, thereby purportedly rendering the claim indefinite, but the immediately preceding claim

limitation recites that the processing unit is adapted to “detect a gesture has been performed.” To whatever extent this does not amount to explicit antecedent basis, this antecedent basis for “the detected gesture” follows implicitly from “detect a gesture has been performed.” *See Energizer Holdings Inc. v. Int’l Trade Comm’n*, 435 F.3d 1366, 1371 (Fed. Cir. 2006) (holding that “an anode gel comprised of zinc as the active anode component” provided implicit antecedent basis for “said zinc anode”).

Defendants suggest that the antecedent basis is unclear because, Defendants argue, “the detected gesture” could alternatively be read as referring back to the recital of a “sensor adapted to detect a gesture.” (*See* Dkt. No. 70, at 28.) This is not a fair reading of the disputed term in the context of a claim as a whole because the claim sets off distinct limitations as to what “the processing unit is adapted to” perform. Relatedly, the recital of “a sensor adapted to detect a gesture in the digital camera field of view” is a recital of a sensor, not a recital regarding detection of a particular gesture.

Finally, as to Defendants’ argument that “it is unclear what it means to identify a gesture that has already been detected apart from a plurality of other gestures” (*id.*), the recital that the gesture “is identified” requires more than merely “detect[ing] a gesture.”

The Court therefore hereby expressly rejects Defendants’ indefiniteness argument, and Defendants present no alternative proposed construction. The Court hereby construes **“the detected gesture is identified by the processing unit apart from a plurality of gestures”** to have its **plain meaning, wherein the antecedent basis for “the detected gesture” is the phrase “detect a gesture has been performed.”**

24. “the electro-optical sensor” and “the electro-optical sensor field of view”

<p align="center">“the electro-optical sensor” “the electro-optical sensor field of view” (’949 Patent, Claim 13)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	Indefinite for lack of antecedent basis

(Dkt. No. 55, App’x 1, at 19; Dkt. No. 73, Ex. A, at 40.)

(1) The Parties’ Positions

Plaintiff argues that “[a] POSITA would understand that the reference to ‘the electro-optical sensor’ in the context of the processing unit element refers to ‘a sensor adapted to detect a gesture’ described earlier in the claim.” (Dkt. No. 64, at 26 (citing *id.*, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶ 72).)

Defendants respond that “[t]hese terms are indefinite because it is unclear whether ‘the electro-optical sensor’ refers to ‘a digital camera,’ ‘a sensor,’ or something else.” (Dkt. No. 70, at 28; *see id.* at 28–29.)

Plaintiff replies that “Defendants fail to address the unambiguous claim language that provides antecedent basis for these terms.” (Dkt. No. 72, at 10.)

At the September 21, 2021 hearing, Defendants argued that no implicit antecedent basis is possible because of the mixing of terminology in this claim.

(2) Analysis

This disputed term appears in Claim 13 of the ’949 Patent, which recites (emphasis added):

13. An image capture device comprising:

a device housing including a forward facing portion, the forwarding [sic] facing portion encompassing *a digital camera adapted to capture an image and having a field of view* and encompassing *a sensor adapted to detect a gesture in the digital camera field of view*; and

a processing unit operatively coupled to the sensor and to the digital camera, wherein the processing unit is adapted to:

detect a gesture has been performed in *the electro-optical sensor field of view* based on an output of *the electro-optical sensor*, and

correlate the gesture detected by *the sensor* with an image capture function and subsequently capture an image using the digital camera, wherein the detected gesture is identified by the processing unit apart from a plurality of gestures.

The relationships between “a digital camera,” “a sensor” and “the electro-optical sensor,” though perhaps drafted inartfully, are readily understandable upon reading the claim as a whole. The recital of the processing unit being adapted to “correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera” demonstrates that the limitation of “detect a gesture has been performed in the electro-optical sensor field of view based on an output of the electro-optical sensor” refers back to “a sensor,” not the digital camera.

The Court therefore hereby expressly rejects Defendants’ indefiniteness argument, and Defendants present no alternative proposed construction. The Court hereby construes “**the electro-optical sensor**” and “**the electro-optical sensor field of view**” to have their **plain meaning**, wherein the antecedent basis for “**the electro-optical sensor**” is “**a sensor adapted to detect a gesture in the digital camera field of view.**”

25. “a processing unit within the device housing and operatively coupled to an output of the electro-optical sensor, wherein the processing unit is adapted to: determine a gesture has been performed in the electro-optical sensor output, and control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory”

<p>“a processing unit within the device housing and operatively coupled to an output of the electro-optical sensor, wherein the processing unit is adapted to: determine a gesture has been performed in the electro-optical sensor output, and control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory” (’949 Patent, Claim 1)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6	<p>Means-plus-function</p> <p>Function: “determine a gesture has been performed in the electro-optical sensor output, and control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) determining a gesture that includes a hand motion (Claim 2)</p> <p>Structure: Indefinite</p>

(Dkt. No. 55, App’x 1, at 19–20; Dkt. No. 73, Ex. A, at 26–27.)

(1) The Parties’ Positions

Plaintiff argues that Defendants cannot overcome the presumption that this non-means term is not subject to 35 U.S.C. § 112, ¶ 6. (Dkt. No. 64, at 26.) In particular, Plaintiff argues

that these disputed terms recite “the physical relationship and connections between the recited components of the claimed ‘portable device,’” and “[t]he term ‘a processing unit’ recites sufficient structure to a POSITA such that they would understand that ‘a processing unit’ is a microprocessor, computer, or central processing unit.” (*Id.* at 26–27 (citing *id.*, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶ 63).) Plaintiff urges that “[t]his claim term would inform a POSITA that the claimed ‘a processing unit’ is physically located within the device housing and is operatively coupled to an output of the electro-optical sensor,” and “[t]he particular processing unit must be capable of being programmed to have the capabilities recited in the claims.” (Dkt. No. 64, at 27 (citing *id.*, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶ 64).)

Defendants respond that “[s]imilar to the ’924 Patent ‘computer’ term and the ’079 Patent ‘processor’ term discussed above, the processing unit terms in the ’949 Patent fail to recite sufficient structure for performing the claimed functions,” and “[a] processor itself is not sufficient structure for performing these software-implemented functions.” (Dkt. No. 70, at 29 (citations omitted).) Defendants urge that “the ’949 Patent does not describe any specific ‘processing unit,’ nor has GTP proposed construing the processing unit as any specific processor known for detecting gestures.” (*Id.*, at 29.)

Plaintiff replies that “[a]s with the ‘computer’ terms, these ‘processing unit’ terms are not indefinite because the claim language describes the physical relationship and connections between the recited components of the claimed ‘portable device.’” (Dkt. No. 72, at 10 (citation omitted).)

(2) Analysis

These “processing unit” terms present substantially the same issues as the above-discussed “processor” term. Here, too, although “processing unit” may refer to a broad class of

structures, this breadth does not necessarily render the term non-structural. *See Skky*, 859 F.3d at 1119. As discussed above, Defendants’ reliance on *St. Isidore* is unpersuasive. *See* 2016 WL 4988246, at *14. The Court’s analysis in the *SyncPoint* case is applicable. *See* 2016 WL 55118, at *18–*21; *see also Samsung*, 948 F.3d at 1354 (“the term ‘digital processing unit’ clearly serves as a stand-in for a ‘general purpose computer’ or a ‘central processing unit,’ each of which would be understood as a reference to structure in this case, not simply any device that can perform a particular function”).

The Court therefore hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

Defendants present no alternative proposed construction. The Court accordingly hereby construes **“a processing unit within the device housing and operatively coupled to an output of the electro-optical sensor, wherein the processing unit is adapted to: determine a gesture has been performed in the electro-optical sensor output, and control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory”** to have its plain meaning (apart from the Court’s constructions of constituent terms).

26. “processing unit”

<p style="text-align: center;">“processing unit” (’949 Patent, Claim 8)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6	<p>Means-plus-function</p> <p>Function: “determining a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output, wherein the determined gesture corresponds to an image capture command”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) determining a gesture that includes a hand motion (Claim 9)</p> <p>Structure: Indefinite</p>

(Dkt. No. 55, App’x 1, at 20–21; Dkt. No. 73, Ex. A, at 38.)

(1) The Parties’ Positions

Plaintiff argues that Defendants cannot overcome the presumption that this non-means term is not subject to 35 U.S.C. § 112, ¶ 6. (Dkt. No. 64, at 27.) Plaintiff argues that the limitations at issue “describe the physical relationship and connections between the recited components of the claimed ‘portable device,’” “[t]he term ‘a processing unit’ recites sufficient structure to a POSITA such that they would understand that ‘a processing unit’ is a microprocessor, computer, or central processing unit,” and “[t]his claim term would inform a POSITA that the claimed ‘processing unit’ makes a determination based on the ‘electro-optical sensor output.’” (*Id.*, at 28 (citing *id.*, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶¶ 66–67).)

Defendants respond as to this disputed term together with the other above-discussed “processing unit” terms in the ’949 Patent. (*See* Dkt. No. 70, at 29–30.)

Plaintiff replies likewise. (*See* Dkt. No. 72, at 10.)

(2) Analysis

As discussed above regarding other “processor” and “processing unit” terms, the Court hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6. Defendants present no alternative proposed construction. The Court accordingly hereby construes “**processing unit**” to have its **plain meaning**.

27. “processing unit operatively coupled to the sensor and to the digital camera, wherein the processing unit is adapted to: detect a gesture has been performed in the electro-optical sensor field of view based on an output of the electro-optical sensor, and correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera, wherein the detected gesture is identified by the processing unit apart from a plurality of gestures”

<p>“processing unit operatively coupled to the sensor and to the digital camera, wherein the processing unit is adapted to: detect a gesture has been performed in the electro-optical sensor field of view based on an output of the electro-optical sensor, and correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera, wherein the detected gesture is identified by the processing unit apart from a plurality of gestures” (’949 Patent, Claim 13)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6</p>	<p>Means-plus-function</p> <p>Function: “detect a gesture has been performed in the electro-optical sensor field of view based on an output of the electro-optical sensor, and correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera, wherein the detected gesture is identified by the processing unit apart from a plurality of gestures”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) determining a gesture that includes a hand motion (Claim 14)</p> <p>Structure: Indefinite</p>

(Dkt. No. 55, App’x 1, at 21–22; Dkt. No. 73, Ex. A, at 41–42.)

(1) The Parties' Positions

Plaintiff argues that Defendants cannot overcome the presumption that this non-means term is not subject to 35 U.S.C. § 112, ¶ 6. (Dkt. No. 64, at 29.) Plaintiff argues that “[t]his claim term would inform a POSITA that the claimed ‘a processing unit’ is operatively coupled to the sensor and to the digital camera,” “a POSITA would understand that the claimed processing unit is not being functionally claimed,” and “[t]he particular processing unit must be capable of being programmed to have the capabilities recited in the claims.” (*Id.* (citing *id.*, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶¶ 69–70).)

Defendants respond as to this disputed term together with the other above-discussed “processing unit” terms in the ’949 Patent. (*See* Dkt. No. 70, at 29–30.)

Plaintiff replies likewise. (*See* Dkt. No. 72, at 10.)

(2) Analysis

As discussed above regarding other “processor” and “processing unit” terms, the Court applies the presumption against means-plus-function treatment for this non-means term, and the Court hereby expressly rejects Defendants’ proposal that the disputed term is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

Defendants present no alternative proposed construction. The Court accordingly hereby construes **“processing unit operatively coupled to the sensor and to the digital camera, wherein the processing unit is adapted to: detect a gesture has been performed in the electro-optical sensor field of view based on an output of the electro-optical sensor, and correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera, wherein the detected gesture is**

identified by the processing unit apart from a plurality of gestures” to have its plain meaning (apart from the Court’s constructions of constituent terms).

28. “electro-optical sensor”

<p align="center">“electro-optical sensor” (’949 Patent, Claims 1, 4, 6–8, 11–13)</p>	
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“a sensor that senses light by measuring changes to an electric field”

(Dkt. No. 55, App’x 1, at 23; Dkt. No. 73, Ex. A, at 33.)

(1) The Parties’ Positions

Plaintiff argues that “[a]n electro-optical sensor is well-understood to be a sensor that converts [*sic*] optical signals into an electric signal,” and “[t]here is no evidence in the specification or prosecution history to deviate from the term’s ordinary meaning.” (Dkt. No. 64, at 30 (citing *id.*, Ex. E, July 16, 2021 Occhiogrosso Decl., at ¶ 72).)

Defendants respond by citing their arguments as to the disputed terms “electro-optically sensing” and “electro-optical sensing” in the ’431 Patent and by arguing that “[a]lthough the patent does not explain what an ‘electro-optical’ sensor is, Defendants’ proposal is consistent with how similar terms are defined by technical dictionaries and would clarify the meaning of this technical term for the benefit of the jury.” (Dkt. No. 70, at 30 (citations omitted).)

Plaintiff replies as to this disputed term together with the terms “electro-optically sensing” and “electro-optical sensing,” which are addressed above. (*See* Dkt. No. 72, at 5.)

(2) Analysis

As discussed above regarding the terms “electro-optically sensing” and “electro-optical sensing,” Defendants’ proposal of “measuring changes to an electric field” lacks support in either the intrinsic or extrinsic evidence, and the Court hereby expressly rejects Defendants’ proposed construction, including as to Defendants’ proposal of requiring “changes” and an “electric field.” No further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**electro-optical sensor**” to have its **plain meaning**.


V. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit.

Based on the Court’s analysis of the disputed term “wherein the gesture is performed by a person other than the user of the handheld device,” as set forth above, the Court finds that Claim 9 of the ’924 Patent is indefinite.

The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

So ORDERED and SIGNED this 12th day of October, 2021.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE